

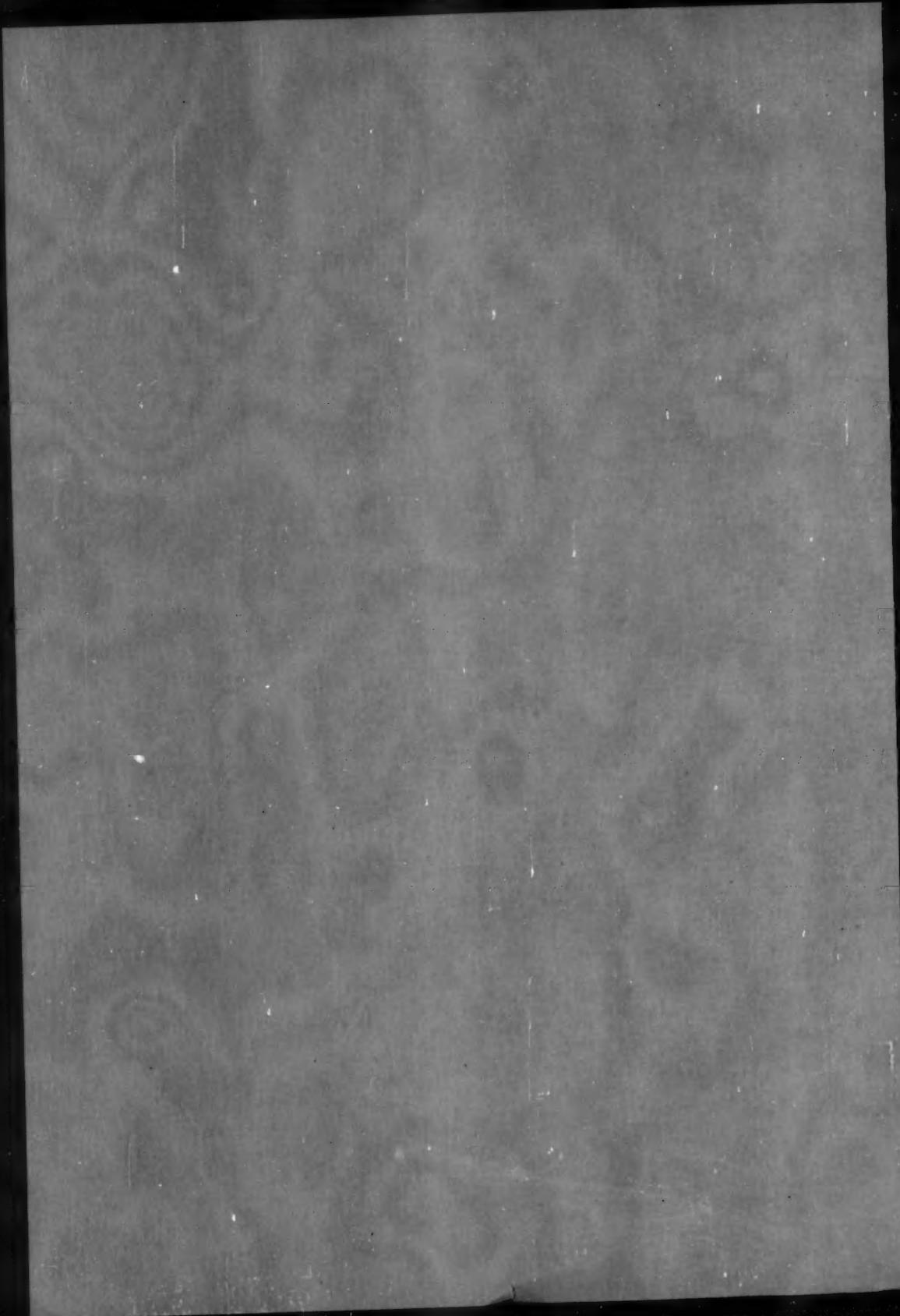
THE AMERICAN JOURNAL of PSYCHIATRY

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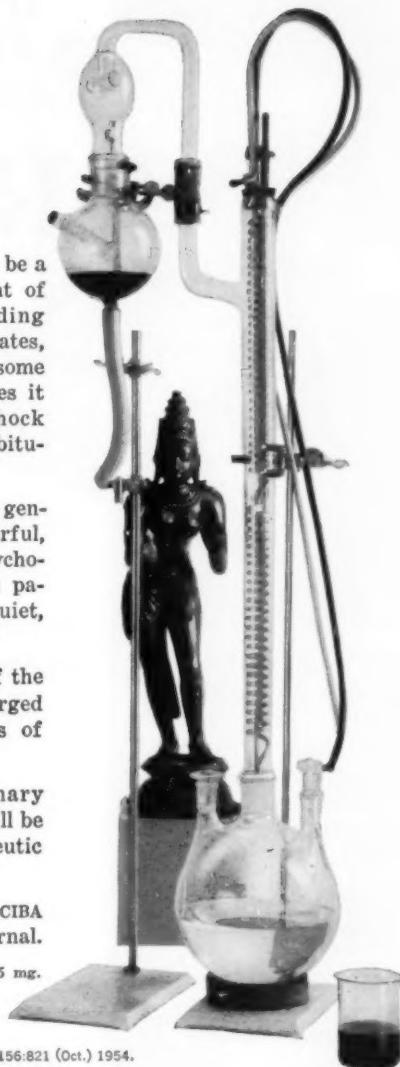
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1. Noce, R. H., Williams, D. B., and Rapaport, W.: J. A. M. A.: 156:821 (Oct.) 1954.



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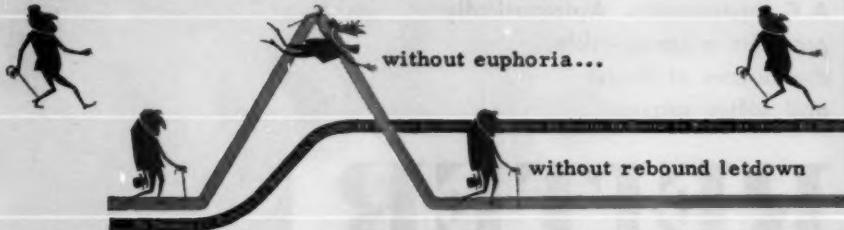
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2. Forster, F.M.: M. Ann. District of Columbia 23:137 (Mar.) 1954.
3. Lambros, V.S.: Personal Communication.

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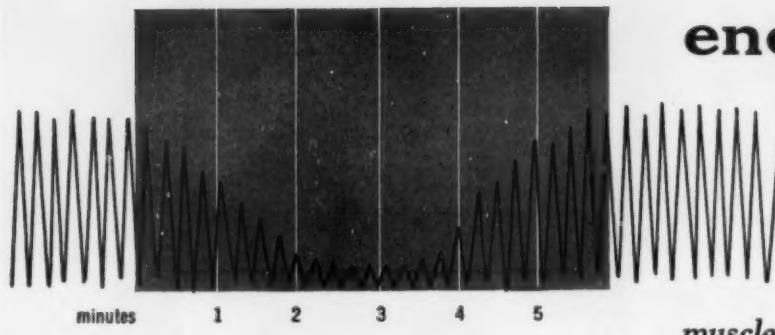
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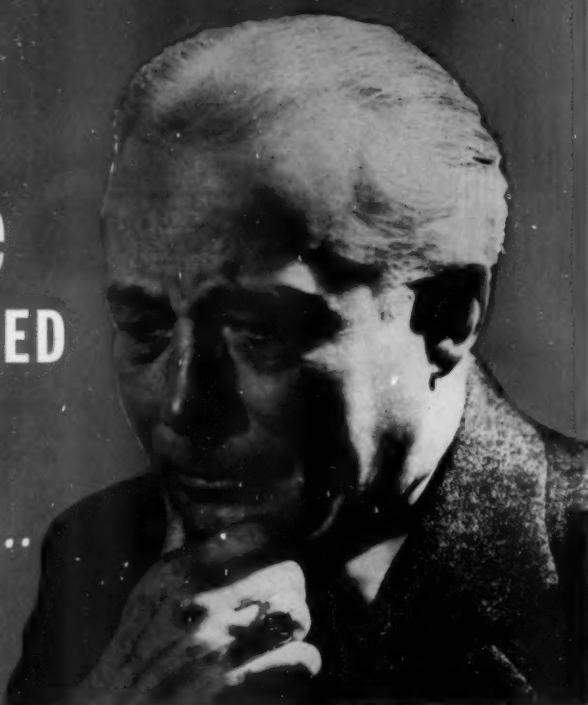
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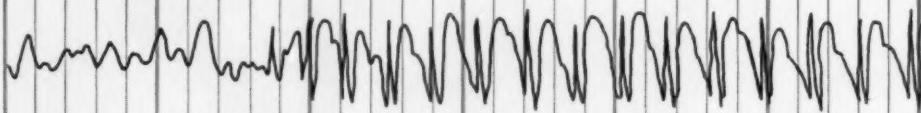
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*Himwich, H. E.: Paper presented at American Psychiatric Association Meeting, St. Louis, May, 1954.



GRAY PHARMACEUTICAL CO., INC., Newton 58, Massachusetts

THE OPERATIONAL MATRIX OF PSYCHIATRIC PRACTICE

I. CONSISTENCY AND VARIABILITY IN INTERVIEW IMPRESSIONS OF
DIFFERENT PSYCHIATRISTS¹

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It is a common observation that psychiatrists frequently differ among themselves in their professional impressions of an individual or group of individuals. These differences in opinions are reflected in variations in diagnoses, prognoses, and treatment procedures. Variability between psychiatrists in psychiatric impressions of the same patient have been attributed to differences in training and clinical experience(1), failure of communication brought about by the use of different nomenclatures(7) and definitions(8), and differential social stimulation value of the various psychiatrists which elicits different reaction patterns from the same patient(1). The personality dynamics of the psychiatrist himself has been stressed by many as a cause for his greater sensitivity to certain facets of the patient's personality and a greater perceptual distortion of other facets.

Because of the general importance of psychiatric diagnosis and prognosis, particularly in the armed forces, the Neuropsychiatry Branch, Bureau of Medicine and Surgery, U. S. Navy, has sponsored a number of investigations into psychiatric selection procedures and methodology. In observing and participating in these, the impression has been gained that variability in interview impressions of different psychiatrists may well be the keystone of the selection structure. An attempt has been made to apply the statistical methods of "objective" science to this baffling problem and the many questions it poses; the results will be presented in this and several papers to follow.

Four questions emerged early: (1) Are

there any systematic patterns of individual variation that occur in psychiatric impressions? (2) If variations do exist, how do they influence the validity of diagnostic and prognostic statements? (3) If systematic variations exist, to what can they be attributed? (4) Can statistical methods be applied successfully to such a complicated clinical problem?

The present paper is a report of an investigation of questions 1, 2 and 4, plus a tentative hypothesis, suggested by the collected data, bearing on question 3. Subsequent reports will test the hypothesis with varying statistical approaches.

METHOD AND PROCEDURE

General Background.—Since 1949 the Marine Corps Schools, Quantico, Virginia, have conducted a 4-week screening course to select men for commissioning in the Marine Corps from candidates recommended by their respective Commanding Officers. The candidates were a relatively homogeneous group. The details of the procedures and some of the results are to be found elsewhere(9) and will only be outlined here.

During the 4-week course, the candidates were organized into platoons of about 45 men each, and the platoons into sections of about 15 men each. The line officers in charge of each section, together with the line officers in charge of the platoon and the company, observed each candidate in a wide variety of test situations designed to simulate known service situations. On the basis of these observations, 4 line officers assessed each of the candidates in relation to the other candidates in his platoon, and from these evaluations a rank ordering of the candidates was derived. The rational basis for this procedure is clear: a work sample provides the basis for making predictions about subsequent behavior in similar situations.

Quite apart from this evaluation by line officers was the portion of the assessment program conducted by the Neuropsychiatry Branch. In this portion, which required approximately 27 hours per candidate, extensive and detailed data were gathered on each man. These data formed the basis for evaluation of the candidates, but were not used in the final selection of the candidates for commissioning; rather, the data were collected to ascertain the contributions that this material could make

¹ Statistical analyses reported herein were made under ONR Contract N7 onr 43404, T. O. #4, between the Office of Naval Research and Tulane University. The authors express their thanks to Dr. E. L. Hoffmann for his assistance in making those analyses. The opinions expressed herein are the authors' and do not necessarily reflect the opinions of the Department of the Navy.

to the prediction of long-term effectiveness of the candidates.

Psychiatric Assessment Staff.—The psychiatric assessments were made by navy medical personnel taken from regular duty as psychiatrists at various navy installations in the eastern part of the United States. As demonstrated in Table 1, they had considerable experience in navy psychiatry; a billet routinely involving assessment work. All the psychiatrists had worked together previously on assessment teams. Just prior to the beginning of each of the 2 assessment periods, in which data reported herein were gathered, a 2-hour briefing session was held in which definitions and meanings of evaluation terms and procedures were discussed. Five of the psychiatrists participated in both assessment periods.

Evaluation Procedures.—The data for this report were collected at 2 assessment periods, 5 weeks apart, each lasting 5 days. An individual psychiatric interview, which lasted approximately 20 minutes, was conducted with each candidate. Just prior to being interviewed the candidate filled out a personal history form which requested pertinent details about the developmental, motivational, emotional, and social backgrounds of the candidate. This personal history was taken to the psychiatrist at the time of the interview and was scanned before the interview was opened. The candidates assessed were assigned at random to the psychiatrists. Following each interview the psychiatrist filled out a psychiatric evaluation form on the man. Fig. 1 is a reproduction of the form used. The scale at the top was checked by the psychiatrist to indicate his impression of the probable success of the candidate as a marine officer. Some criticism of the use of the form was expressed, but each psychiatrist agreed that it would be possible to make at least a "best guess" evaluation of the candidate in terms of the information requested. Thus it was assured that an opinion or rating was expressed by all psychiatrists on the categories included in the form. The data recorded on the forms were evaluated by 2 independent methods.

TABLE 1
PROFESSIONAL TRAINING AND EXPERIENCE
BACKGROUND OF PSYCHIATRISTS
(AT TIME OF EXPERIMENT)

| Psychiatrist | Chronological age | Years since receiving M. D. | Total years exp. in psychiatry | Years exp. in navy psychiatry | Specialty board member in psychiatry |
|--------------|-------------------|-----------------------------|--------------------------------|-------------------------------|--------------------------------------|
| A * | 29 | 5 | 4 | 3 | No |
| B * | 32 | 7 | 3 | 2 | No |
| C * | 25 | 15 | 3 | 2 | No |
| D * | 33 | 6 | 5 | 5 | Eligible |
| E * | 36 | 9 | 8 | 7 | Yes |
| F | 38 | 12 | 9 | 8 | Yes |
| G | 28 | 4 | 3 | 1 | No |
| H ** | 28 | 4 | 3 | 3 | No |
| I ** | 28 | 4 | 3 | 1 | No |

* Participated in 2 assessment periods.

** Did not participate in reliability portion of study.

Random Assignment Method.—The first method was to correlate the psychiatrist's impression of the probable success of the candidates as marine officers with the lineal ranking of the candidate made by the marine line officers conducting the course. These rankings served as a "criterion" for evaluating the "probable success" rankings made by the psychiatrists.

A second method to evaluate the data on the psychiatric evaluation form was as follows: (1) The percentage of assignments to each personality classification was calculated for *all* psychiatrists; (2) The percentage of assignments to each personality classification was calculated for *each* psychiatrist; (3) The summed classifications for each psychiatrist were superimposed graphically on the average of the summed classifications for the group.

The rationale for random assignment of the candidates to psychiatrists, utilized in this procedure, involved the assumption that the candidate population would be divided between psychiatrists in such a manner that each would see (within sampling error) an equal number of subjects showing the same predominant personality types. Providing this assumption was tenable, each psychiatrist was expected to report the same pattern of distribution of personality types as observed by the psychiatric group as a whole. If systematic patterns of variation between psychiatrists did exist, the individual and group distributions would differ.

Re-interview Method.—During one assessment period, 124 officer candidates were given a second psychiatric interview. These men were assigned at random to the psychiatrists with the restriction that no psychiatrist should interview the same candidate a second time. Thus 2 independent psychiatric evaluations were available on each 124 men.

The over-all ratings of "probable success as an officer" were evaluated by correlating the ratings. The checked data on dominant personality type were evaluated by contrasting the frequency with which a given psychiatrist had checked each category for the group of men he had seen ("observed frequency") with the average pooled frequencies with which those categories were used by the other psychiatrists who had seen the same men ("expected frequency"). A similar analysis was made of the data indicating the most dominant (*i.e.*, checked "1") defense mechanisms.

The "brief subjective summary" paragraphs were analyzed by use of "content analysis" techniques (5, 6). Twenty-one categories were used.²

The 248 evaluation sheet summaries coded were evaluated in the same manner as the checked category data; *i.e.*, the frequency with which a given psychiatrist had used each category was graphically contrasted with the average frequency of use by the other psychiatrists who had seen the same men.

Finally, a reliability check was made on the consistency of content coding by drawing, at random, 25 of the summaries and independently recoding them 2 weeks following the original coding.

² The categories and method of scoring are available from the authors on request.

(Reproduction of)
PSYCHIATRIC EVALUATION FORM

| Name | Class | Group | date |
|--------------------------|----------------------|----------------------|-----------------------|
| 0 Unacceptable | 1 Inferior | 2 Low Ave. | 3 High Ave. |

4
Superior

5
Outstanding

Brief Subjective Summary:

Neuropsychiatrist _____ M.D.

DESCRIPTIVE CATEGORY SCALES

Check dominant personality type

- 1. anxiety _____
- 2. hysteria _____
- 3. obsessive _____
- 4. psychopathic _____
- 5. cyclothymic _____
- 6. schizoid _____
- 7. paranoid _____
- 8. other? _____

specify

Check in order of frequency used, three dominant mechanisms utilized (1,2,3)

- 1. REPRESSION
 - 1.1 partial repression
 - 1.2 disturbed interpersonal relations
 - 1.3 secretiveness
 - 1.4 taboos and scruples
 - 1.5 indecision
- 2. ESCAPE
 - 2.1 phobia
 - 2.2 regression
 - 2.3 flight to fantasy
 - 2.4 hyperactivity
 - 2.5 flight to reality
- 3. DISGUISE
 - 3.1 displacement
 - 3.2 introjection
 - 3.3 projection
 - 3.4 aggression
 - 3.5 character defense-narcissism, masochism, etc.
 - 3.6 rationalization
- 4. MODIFICATION
 - 4.1 sublimation
 - 4.2 reaction formation
 - 4.3 compensation
- 5. TESTING REALITY
- 6. PAYING A PENALTY
 - 6.1 restitution
- 7. AUTOEROTISM
 - 7.1 masturbation

STRESS SCALE (check one)

| | | |
|----|-------------|---|
| 10 | max. stress | max. assets min. liabilities |
| 9 | max. stress | max. assets mod. liabilities |
| 8 | max. stress | max. assets max. liabilities |
| 7 | mod. stress | max. assets min. liabilities |
| 6 | mod. stress | max. assets mod. liabilities |
| 5 | mod. stress | max. assets max. liabilities |
| 4 | min. stress | max. assets min. liabilities |
| 3 | min. stress | max. assets mod. liabilities |
| 2 | min. stress | max. assets max. liabilities |
| 1 | custodial | mod. or less assets min. to mod. liabilities |

FIG. 1.—A reproduction of the psychiatric evaluation form used in this study.

RESULTS

The identification of the type and number of contributions which psychiatrists can make to the successful assessment of personnel was one goal of this assessment research program. It has been well documented (2, 3, 4, 10, 11) that the psychiatrist makes significant contributions to effective selection from a draft population. The contributions that the psychiatrist can make to the far more difficult and subtle problem of identifying potential officer leaders in a group of carefully selected, outstanding enlisted men has been less well documented. Theoretically, at least, the psychiatrist should be able to make a distinct contribution to these programs as well. He is evaluating an individual who is functioning in an interpersonal situation. There, aspects of the candidate's personality structure and their dynamic implications for present and future behavior are considered from the unique point of view provided by psychiatric training, and this information is synthesized to emerge as the "impression" of the psychiatrist.

Psychiatric-Line Officer Comparison.—One way used in the present study to evaluate the contributions made by psychiatrists to successful officer assessment was to correlate the psychiatrist's "over-all" ratings of probable officer success with the following "criterion" measures: (1) Independent estimates of probable success made by the training line officers at the conclusion of the assessment course; (2) evaluations made by each candidate (peer ratings) of the probable officer success of the other candidates in his platoon; (3) rank ordering of successful candidates at the end of a 6-month officer basic training course.⁸

Figure 2 presents a bar graph distribution of the percentage of total over-all ratings, assigned each rating category, by each psychiatrist. It will be noted that each psychiatrist tended to have his own individual

⁸ The ideal criterion against which to evaluate the psychiatric impression would be the actual performance of the men in the status position of "officer." Research is being sponsored by the Neuropsychiatry Branch, Bureau of Medicine and Surgery, U. S. Navy, designed to evaluate these psychiatric impressions against carefully collected officer performance data on these men.

frame of reference for judging the range of "officer potential" present among the candidates they saw. Psychiatrist C, for example, anchored his ratings in categories "1" and "4," with the preponderance of ratings falling in category "3." Psychiatrist A, in contrast, distributed his ratings throughout the

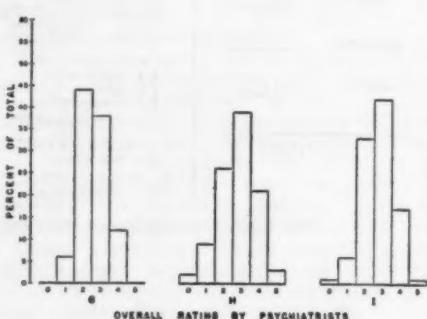
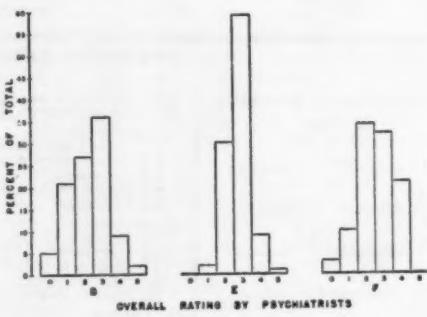
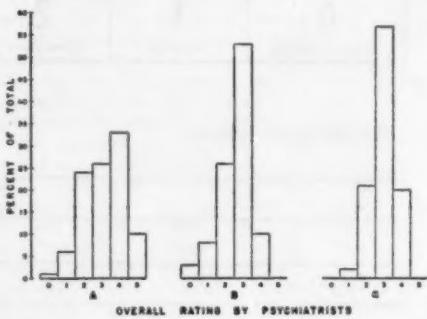


FIG. 2.—Psychiatrists' individual distributions of officer success' ratings.

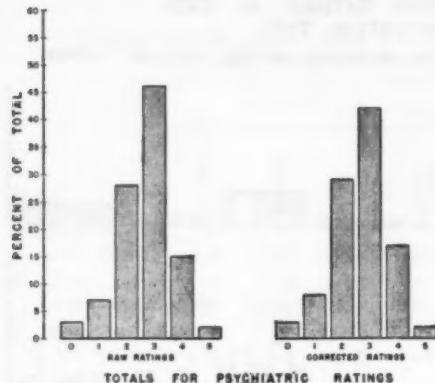


FIG. 3.—Distribution of combined ratings by psychiatrists of probable officer success.

range of from "1" to "5," with the tendency for the majority of his ratings to be average or above. Appropriate statistical tests showed that the chances were less than one in 100 that the distributions of ratings, in Fig. 2, were from a common population of ratings, i.e., ratings on comparable groups by psychiatrists *all using comparable criteria*. Thus, these graphs demonstrate the role of individual differences among psychiatrists in lowering the interpsychiatrist reliability of psychiatric impressions.

Figure 3 demonstrates that the combined ratings for all psychiatrists are distributed in a symmetrical manner, thus permitting the use of correlational analysis to evaluate the degree of agreement with the line officer ratings. The graph in Fig. 3 labeled "corrected ratings" is one in which the distribution takes into account the number of men seen by each psychiatrist.

Table 2 presents the result of the correlational analysis. All of the coefficients are positive and statistically significant. It will be observed that a much higher agreement

held between the line officers and the peer ratings than held between either of those ratings and the psychiatrists' ratings. At least two different factors may account for this result: (1) the line officers judged the men against a perspective of officer duties and responsibilities which was different from the perspective used by the psychiatrist; or, (2) the psychiatrists were perceiving aspects of the candidates' personality structure which were not perceived by the line officers. From the data at hand it is not possible to state which of these 2 possibilities were operating, although it is probable that both were involved. The performance follow-up data should provide information to clarify this point. The finding of this analysis that psychiatrists, on the basis of a 20-minute interview, do identify officer leadership potential in an homogeneous group of "normal" superior adult men has significance in its own right since it establishes the statistical *validity* of the psychiatric impression for evaluating superior "normal" adults.

Psychiatrist-Psychiatrist Comparison: Random Assignment Method.—To provide information on the degree to which different psychiatrists were in agreement on the distribution of dominant personality types in the candidate population assessed, an analysis was made of that portion of the data. The results are summarized in Fig. 4 and Table 3.

In Fig. 4 the data are presented separately for each psychiatrist, for each assessment period. The white bars indicate the percentage of the total ratings assigned to each personality type by a given psychiatrist. The stippled portions of the graphs represent the average percentage of the total ratings assigned by *all other* psychiatrists working on the assessment team. Figure 4 clearly demonstrates that each psychiatrist was observing different dominant personality types in the group of men he observed, but all had a greater percentage in the "compulsive" category than in any other single category. Psychiatrist A checked "anxiety" as the dominant type with greater frequency than did the rest of the team; Psychiatrists B and D checked "schizoid," "paranoid" and "other" with greater frequency, and so forth. Figure 4 also demonstrates that the diagnostic differences were stable over time,

TABLE 2

INTERCORRELATIONS HOLDING BETWEEN THE PSYCHIATRIC "OVER-ALL" EVALUATION OF CANDIDATES AND OTHER CRITERION MEASURES OF CANDIDATE FITNESS (N = 886)

| | Line officer rating | Peer ("buddy") rating | Final class standing |
|---------------------------|---------------------------|-----------------------------|----------------------------|
| Psychiatric evaluation... | 0.30 | 0.33 | 0.34 |
| Line officer rating.... | ... | 0.67 | 0.86 |
| Peer rating | ... | ... | 0.76 |

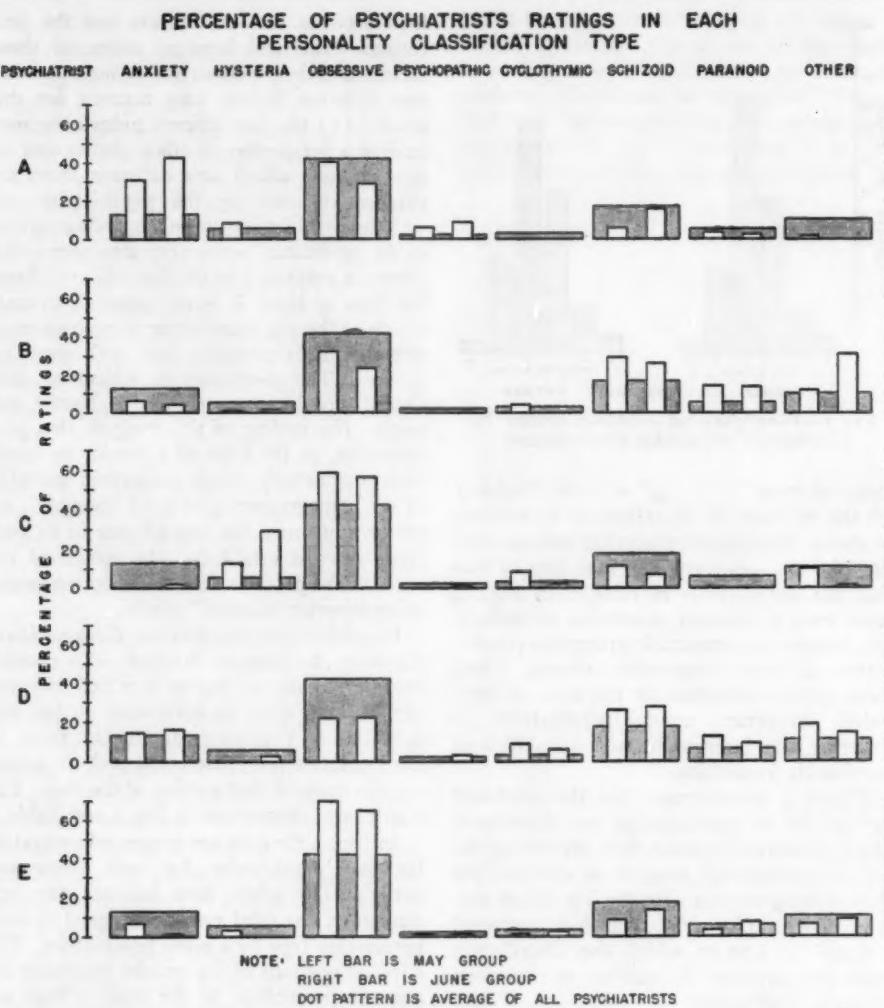


FIG. 4.—Distribution of individual psychiatrist's personality type ratings made during the "random assignment" period they participated in.

i.e., were observed in both the May and June assessment periods. At least 2 hypotheses are suggested by the data presented in Fig. 4: (1) The assignment of candidates to psychiatrists resulted in a distribution, by personality type, with unusual probabilities such that Psychiatrist *A* had assigned to him more candidates who, in fact, were "anxiety" types, Psychiatrists *B* and *D* were assigned more candidates who were "schizoid" or "paranoid" and so forth; or, (2) that the

evaluation form was serving as a "projective device" and the observed differences reflected significant aspects of the psychiatrist's operating frame of reference, including his own psychodynamic structure. In order to test the first hypothesis, 124 men were interviewed a second time by different psychiatrists.

Re-interview Method. There were 7 psychiatrists who took part in this portion of the study. The possibility that the first inter-

TABLE 3

SHOWING THE FREQUENCY WITH WHICH EACH PSYCHIATRIST CHECKED THE VARIOUS PERSONALITY TYPES AND THE AVERAGE RATING ON "OFFICER POTENTIAL" FOR EACH TYPE *

| Psychiatrist | Personality type | | | | | | | | | Totals | |
|---------------------|------------------|----------|-----------|--------------|-------------|----------|----------|-------|------------------------|-------------------|--|
| | Anxiety | Hysteria | Obsessive | Psychopathic | Cyclothymic | Schizoid | Paranoid | Other | Total by psychiatrists | Total ave. rating | |
| A Freq. | 31 | 4 | 30 | 6 | 0 | 9 | 3 | 1 | 84 | 3.12 | |
| Ave. rating .. | 3.32 | 2.25 | 3.47 | 3.50 | 0 | 1.67 | 2.33 | 3.00 | | | |
| B Freq. | 9 | 2 | 47 | 0 | 3 | 46 | 24 | 35 | 166 | 2.60 | |
| Ave. rating .. | 2.67 | 2.00 | 3.17 | 0 | 3.33 | 2.41 | 2.54 | 2.06 | | | |
| C Freq. | 1 | 27 | 82 | 1 | 8 | 14 | 0 | 10 | 143 | 2.94 | |
| Ave. rating .. | 2.00 | 3.04 | 3.05 | 2.00 | 3.25 | 2.21 | 0 | 2.70 | | | |
| D Freq. | 13 | 1 | 19 | 1 | 6 | 23 | 9 | 14 | 86 | 2.31 | |
| Ave. rating .. | 2.15 | 1.00 | 3.37 | 0 | 2.67 | 1.78 | 2.11 | 2.14 | | | |
| E Freq. | 8 | 3 | 111 | 2 | 3 | 17 | 8 | 12 | 164 | 2.78 | |
| Ave. rating .. | 2.38 | 2.33 | 3.01 | 2.50 | 2.67 | 2.29 | 2.25 | 2.17 | | | |
| F Freq. | 3 | 1 | 21 | 2 | 6 | 3 | 0 | 5 | 41 | 2.56 | |
| Ave. rating .. | 3.00 | 4.00 | 2.91 | 1.00 | 2.50 | 2.00 | 0 | 1.60 | | | |
| G Freq. | 1 | 1 | 28 | 2 | 4 | 3 | 7 | 9 | 55 | 2.55 | |
| Ave. rating .. | 2.00 | 2.00 | 2.79 | 2.00 | 3.25 | 2.00 | 2.14 | 2.22 | | | |
| H Freq. | 3 | 4 | 18 | 4 | 2 | 9 | 15 | 1 | 56 | 2.77 | |
| Ave. rating .. | 2.67 | 3.00 | 3.56 | 2.00 | 3.00 | 2.78 | 1.93 | 3.00 | | | |
| I Freq. | 3 | 1 | 38 | 7 | 2 | 9 | 5 | 14 | 79 | 2.70 | |
| Ave. rating .. | 2.67 | 3.00 | 3.24 | 1.86 | 2.50 | 2.22 | 2.40 | 2.07 | | | |
| Total by type.... | 72 | 44 | 394 | 25 | 34 | 133 | 71 | 101 | 874 | 2.73 | |
| Total ave. rating.. | 2.82 | 2.82 | 3.12 | 2.20 | 2.91 | 2.21 | 2.27 | 2.16 | | | |

* (Range of Rating Scale: 0 = unacceptable; 5 = outstanding).

view might influence the candidate's behavior in the second interview was not a source of error in the evaluation of the psychiatrists, since the data were pooled for first and second interviews for each psychiatrist and for the group of psychiatrists with whom each was compared, thus cancelling out this possible source of error.

The correlation between "probable officer success" ratings made on each of 124 men by different pairs of psychiatrists was .15, a correlation not significantly different from zero.⁴

Figure 5 graphically presents an algebraic

matrix showing the degree of difference in the opinions of the different psychiatrists. It will be seen that Psychiatrists C, D, and G accounted for most of the variance difference, i.e., the correlation would have been much higher if the data on only Psychiatrists A, B, E and F had been used.

Figure 6 presents the frequencies with which each personality type category was checked by each psychiatrist. Again, the white bar (i.e., "observed frequency") indicates the frequency with which a given psychiatrist used a given personality type category, and the stippled portions (i.e., "expected frequency") represent the frequency with which the other psychiatrists, *who interviewed the same men*, checked the category. It will be noted that the same characteristic variations between psychiatrists occurred as was observed in Fig. 4, e.g., the tendency of Psychiatrist A to see more anxiety in the candidates than did the rest of the psychiatrists. On the basis of the data

⁴ This finding raises an interesting point in relation to the theory of measurement in that the validity coefficient (r between psychiatrist and line officer) is significantly higher than the reliability coefficient (r between psychiatrists). A technical explanation of the way the obtained validity can, in fact, be higher than the obtained reliability is beyond the scope of this paper. The explanation is to be found in the size of the sample drawn from a population of psychiatrists.

DEGREE OF AGREEMENT BETWEEN VARIOUS PSYCHIATRISTS

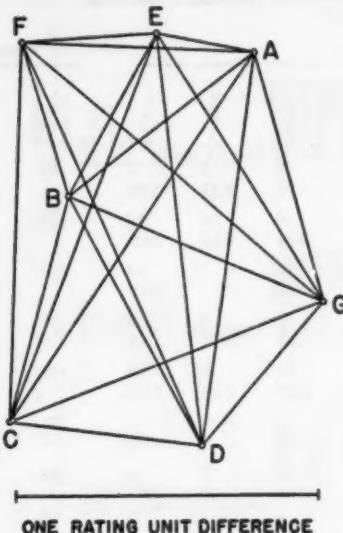


FIG. 5.—An algebraically derived matrix indicating the degree of agreement between psychiatrists who interview the same men.

presented in Fig. 6, it is justifiable to reject the hypothesis that the difference observed in the "random assignment" evaluation was due to an unusual distribution of candidates to psychiatrists.

This leaves us with the alternate hypothesis, *i.e.*, that the evaluation form serves as a "projective device" and the observed differences reflect significant aspects of the psychiatrists' personalities. In an attempt to explore this hypothesis, an analysis was made of the frequency with which the different psychiatrists checked the "dominant mechanisms" reported in the interview-reinterview data. The results of that analysis are presented in Fig. 7.

Again, it will be seen that each psychiatrist had his own preferred mechanisms, as judged against the pooled judgments of the other psychiatrists. If the "projection" hypothesis is tenable, it follows that the psychiatrist would not only project his own unique "personality type" concerns and values, but also reveal the mechanisms typically utilized as defenses.

As mentioned earlier, some resistance by the psychiatrists to the use of the evaluation form was observed. Evaluation forms do require definite commitments to diagnostic categories. They are constructed specifically for categorizing, and do not reflect the nuances of interpersonal transactions typical of human personality. An hypothesis may be offered to the effect that the differences observed in Figs. 4, 6, and 7, are, in some way, a function of the format of the evaluation form. To test this hypothesis a content analysis was run on the brief clinical summaries written by each psychiatrist on each candidate seen in the interview-reinterview portion of the study.⁵ Four personality types were mentioned in the summaries with sufficient frequency to justify their evaluation. The distribution of those frequencies are shown in Fig. 8. The basis of comparison used is the same as used for Fig. 6 and 7. Generally the results are the same as those previously observed in the evaluation form data, with 3 exceptions worth noting. (1) there was a lower frequency of use of diagnostic terms in the clinical summaries than there was on the evaluation form, a result to be expected but still worth mentioning, since it explicitly demonstrates that the clinical summaries are more diffuse and obscure with respect to precise diagnosis; (2) in the clinical summaries, Psychiatrists *B* and *C* exhibited a relatively greater frequency in 2 categories; paranoid-schizoid for *B*, anxiety for *C*. These same 2 psychiatrists were markedly higher than the others in the frequency with which they checked "disguise" as a defense mechanism—apparently the less "structured" clinical summary makes for greater difficulty in disguising significant personality tendencies. (3) Psychiatrists *D*, *E*, and *F* had a marked reduction in the frequency with which they used diagnostic categories in the clinical summaries; *F* was outstanding in this respect. It was also Psychiatrists *D*, *E*, and *F* who had a markedly higher frequency of reporting the use of "repression" as a dominant defense mecha-

⁵ A check was made on the consistency with which the categories could be identified from the context by the coder. An agreement of ninety-one per cent was obtained on a ten per cent sample of the summaries independently coded after a period of two weeks.

**OBSERVED AND EXPECTED FREQUENCIES OF CHECKING
OF PERSONALITY TYPES BY PSYCHIATRIST
ON RELIABILITY STUDY**

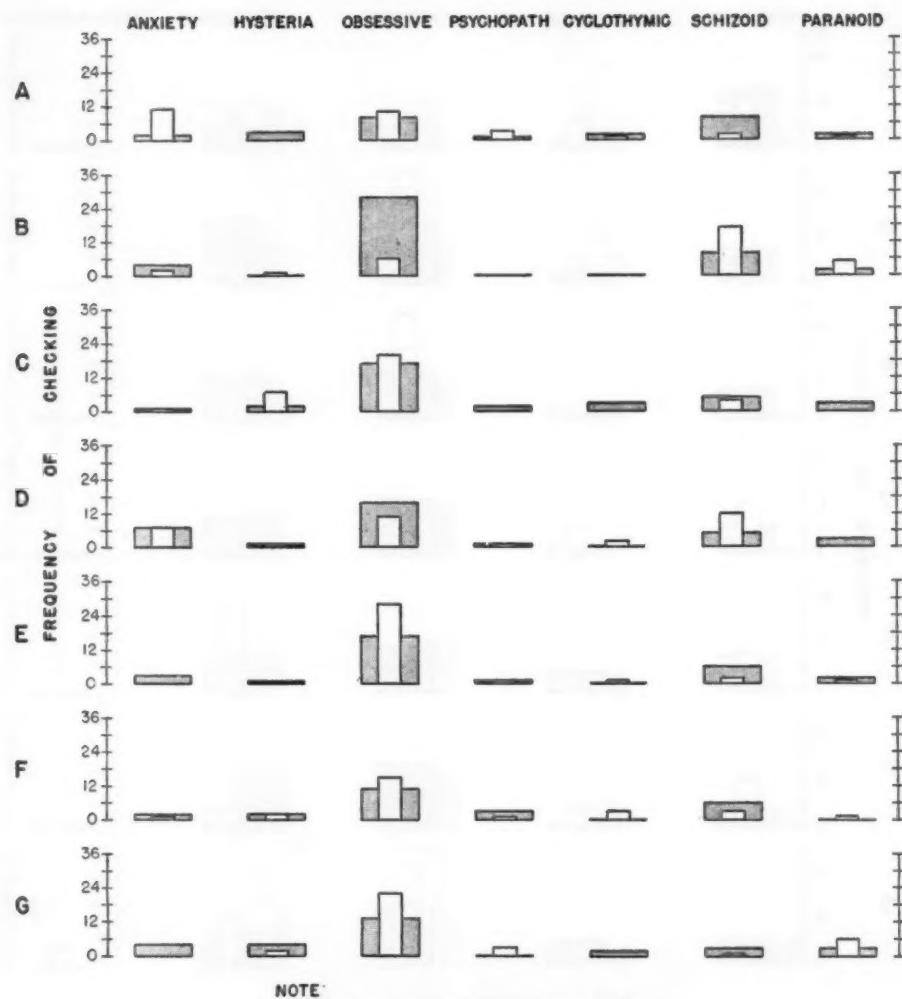


FIG. 6.—The amount of agreement on rated personality type diagnosis between psychiatrists who interviewed the same men.

OBSERVED AND EXPECTED FREQUENCIES OF CHECKING
OF DOMINANT MECHANISMS, USED BY PSYCHIATRISTS
ON RELIABILITY STUDY

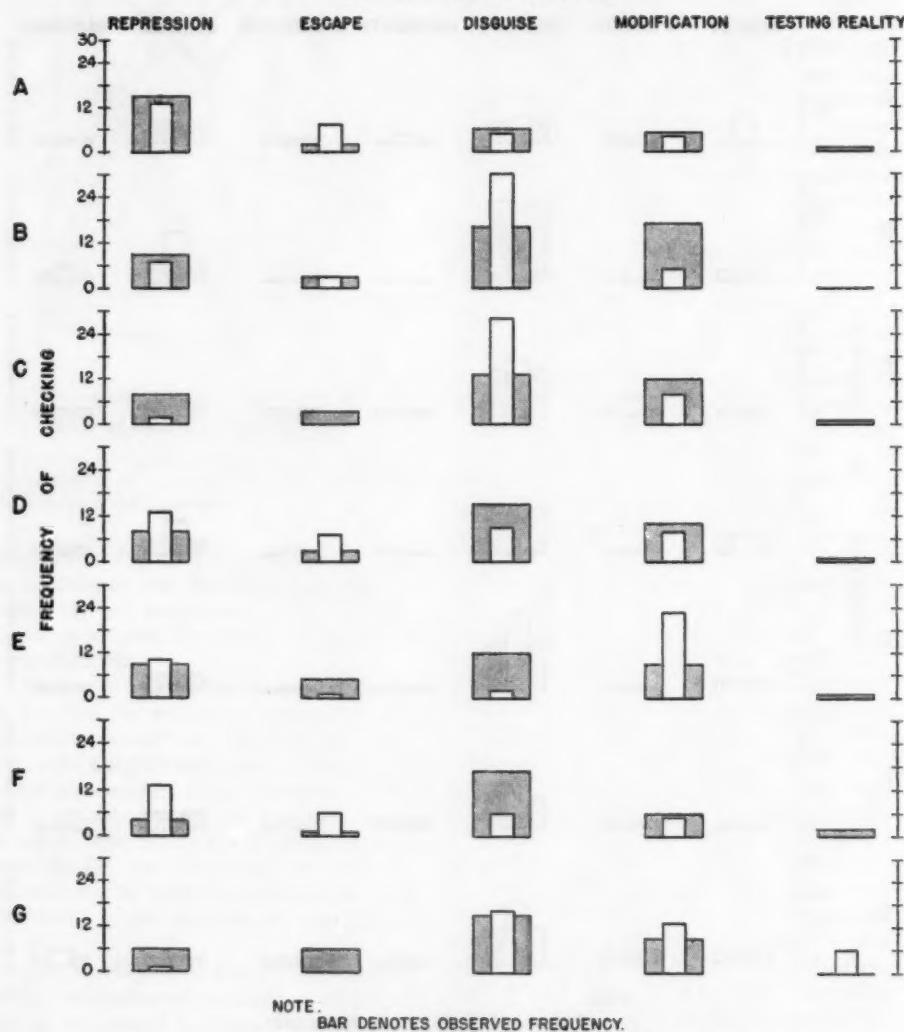
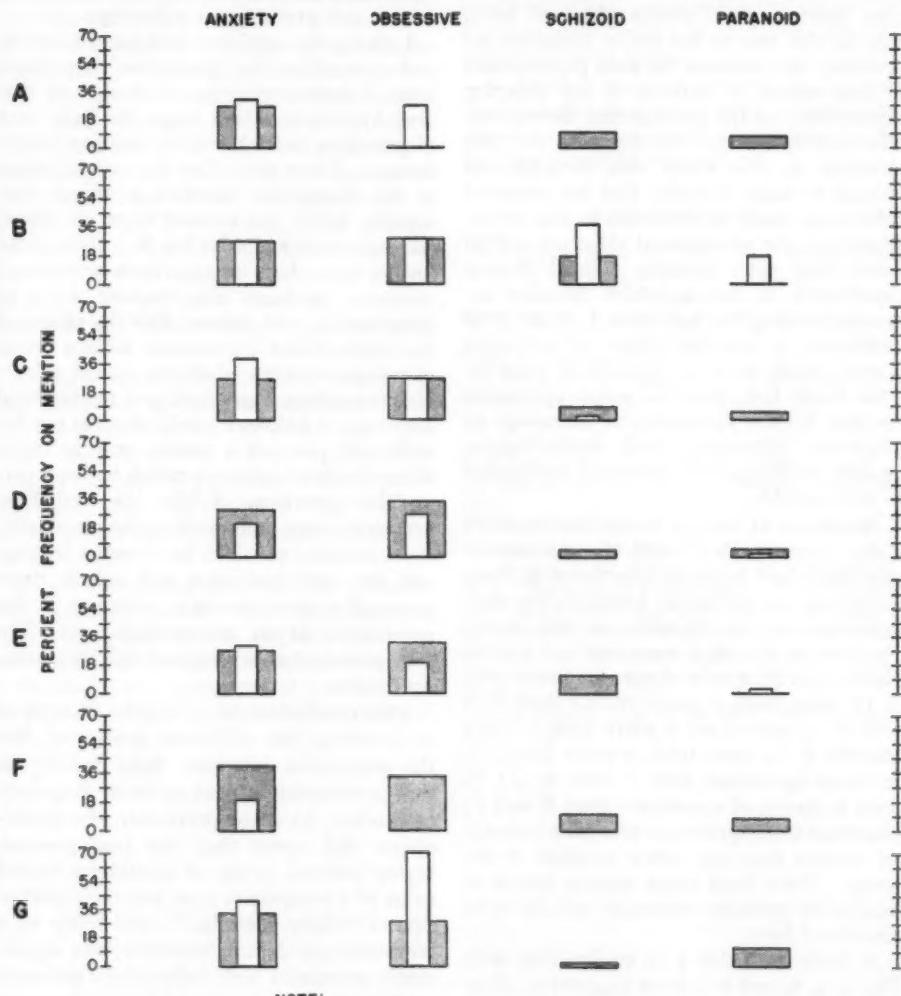


FIG. 7.—The amount of agreement on rated dominant defense mechanisms diagnoses between psychiatrists who interviewed the same men.

PERCENTAGE OF OBSERVED AND EXPECTED FREQUENCIES
OF MENTION OF PERSONALITY TYPES IN CLINICAL SUMMARY
BY PSYCHIATRISTS ON RELIABILITY STUDY



NOTE:

BAR DENOTES OBSERVED PERCENTAGE
STIPPLED PORTION DENOTES EXPECTED PERCENTAGE

FIG. 8.—The amount of agreement expressed in the clinical summaries between psychiatrists who interviewed the same men.

nism—apparently the less "structured" clinical summaries permit repression to occur more easily.

DISCUSSION

The results of this study support a "projection" hypothesis to account for the variance between psychiatrists observed here; that is, that one of the major variables responsible for variation between psychiatrists in impressions of patients is the differing personalities of the psychiatrists themselves. The type of clinical experience of the psychiatrists in this study was homogeneous enough to make doubtful that the observed differences could be attributed to this factor. Moreover, the professional structure within which they were working (Naval Neuro-psychiatry) is one in which informal in-service training has been aimed explicitly at developing a common frame of reference within which to view psychiatric practice. This latter fact, plus the overt agreement reached in the discussion of meanings of diagnostic categories and terms, argue against attributing the observed differences to this variable.

Inspection of Fig. 5, in conjunction with Table 1, reveals that length of experience in psychiatry, and length of experience in Navy psychiatry, are not major factors in the variance between psychiatrists in this study. Psychiatrist A, with 4 years total and 3 years Navy experience, is in closer agreement with E (8 years total, 7 years Navy) than F is with F (9 years total, 8 years Navy). Psychiatrist B (3 years total, 2 years Navy) is in closer agreement with F than is A; D, third in length of experience after E and F, is farthest from agreement with his 2 immediate seniors than any other member of the group. These facts argue against length of time in the specialty as a major variable to be considered here.

A study of Table 3 in conjunction with Fig. 2, 4, 6, and 8 is most suggestive. Psychiatrist A, for example, sees much more anxiety in his candidates than the average psychiatrist. At the same time, he places a higher rating on anxiety than his total average rating (Table 3). He also places a premium value on obsessive traits, and his highest value on psychopathic personalities, of which, again, he sees more than the aver-

age. Psychiatrist B, who sees more than the average schizoid and paranoid personalities, does not think well of either, and grades them below his average rating. It thus seems clear that the psychiatric decision involves not only the psychiatrist's emotional problems and defenses, but also his entire value system and probably his self-image.

Leaving the empirical data for a moment, and approaching the "projection" hypothesis from a theoretical point of view, it is that very hypothesis which forms the basic core of postulates in the theory behind psychiatric therapy. These are: That the patient brings to the therapeutic situation a unique personality which has evolved from the transactional experiences he has had throughout his life span; that this experience-determined structure produces characteristic ways of interacting with others; that the effects of the transactional experiences form a frame of reference within which the patient orients his perceptions, cognitions, and motivational strivings. It follows logically that the psychiatrist can perceive a patient only in terms of the frame of reference which his own personality provides. While his verbalized evaluation may limit itself to the personality characteristics of which he is aware in himself, the total evaluation will include those personality characteristics operating in the psychiatrist at an unconscious level. The data presented above support this theoretical conclusion.

This conclusion should not be thought of as justifying the additional conclusion that the psychiatric interview lacks validity in that psychiatrists cannot agree on diagnostic categories. As noted previously, the psychiatrists did agree that the homogeneous, highly selected group of candidates tended to be of a compulsive type and their evaluation of "officer potential," based solely on a 20-minute psychiatric interview, was significantly correlated with independent estimates made by line officers who had made intensive observations of the men over a period of 4 weeks. The "projection" hypothesis does have implications for psychiatric training programs in that it points to an important dimension which must be considered if the field of psychiatry is to move on to scientific maturity.

SUMMARY

1. A group of experienced psychiatrists interviewed, for 20 minutes each, 886 highly selected officer candidates. On the basis of the information gained in the interview, they estimated the probable success of each candidate in the position of Junior Combat Officer. They also made judgments on each man of his dominant personality type and his typical defense mechanisms utilized.

2. The psychiatrists' judgments of probable officer success correlated, at a statistically significant level, with the independent judgments of line officers who made extensive observations of the candidates over a 4-week period. This finding makes tenable the conclusion that the psychiatric interview can be used to identify potential officer leaders in a group of carefully selected, homogeneous, intellectually superior, adult men.

3. Data were presented demonstrating that the group of psychiatrists showed significant differences in the frequency with which they observed different personality types in random samples drawn from the 886 men and, also, that different psychiatrists tended to see different personality traits in the *same* man.

4. A tentative hypothesis is offered as the best explanation of the differences reported in the paragraph above. Briefly, this hypothesis states that the differences observed in the diagnostic judgments of psychiatrists result from differing frames of reference

which are derived from the transactional life experiences of the psychiatrists. This results in a greater sensitivity on the part of the psychiatrist for certain facets of the patient's personality structure, and a greater perceptual distortion on the part of the psychiatrist to other facets of the patient's personality structure. Once perceived, correctly or distortedly, each item is subjected to the psychiatrist's value system.

5. Further tentative tests of the "projection" hypothesis are underway. A study designed to make a more crucial test of the hypothesis will be reported.

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CLINICAL ASPECTS OF COMBINED PSYCHIATRIC TREATMENTS

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There is a growing trend of scepticism toward the efficacy of methods in psychiatric treatment. Hoch(1) edited the discussions of the 37th meeting of the Psychopathological Association, under the title *Failures in Psychiatric Treatment*. Zubin(2) demands selected treatment and control groups to evaluate the therapeutic results. Similar critical reviews are numerous, declaring one or the other method of treatment as useless, or of only palliative and ephemeral value. Bourne(3) went so far as to speak of "The Insulin Myth," saying that "the evidence for the value of insulin treatment is unconvincing." He believes that electroconvulsive treatment is of equal, or even greater value.

On the other hand, there are several optimistic reports. The "Stockton Project" (4) proved, without doubt, that an "intensive, multilateral approach" can be a potent factor in the rehabilitation of increasing numbers of the so-called chronic patient. Bond(5) made a thorough evaluation of the improvement and recovery rate of patients of the pre- and shock-treatment period. He reports favorable results for the latter, even in the critical 5-year perspective.

When comparing these contradictory opinions, one has to consider the sources of the material evaluated, the statistical methods used, the therapeutic methods applied, whether short or long-term evaluation was made, and last but not least, what diagnostic criteria were followed and what improvement-rating system served to measure the results.

According to country-wide statistics, about 97% of the hospitalized mental patients are treated in state institutions. It is a well-known fact, recognized even by politicians (6), that most of the state mental hospitals are badly overcrowded, understaffed, and far below the modest standards of the A. P. A. (7). Another even more important fact is that the senior members of state hospital staffs, having ample experience and qualifications, are greatly overburdened by administrative duties. Thus, therapeutic activities

are carried out by the junior staff members with little psychiatric training, familiar with only the superficial technicalities of therapeutic methods.

The statistical methods used are usually rather crude. Calculations are made on successive cases, fresh and old, acute and chronic, mixed together. This fourfold evaluation of every case is of prime importance when considering therapeutic measures and results. (By "fresh" cases we mean a recent and first psychotic episode in a "normal" prepsychotic personality; by "old," insidious onset in a peculiar personality, characterized by shyness, asocial habits, hypomanic or depressive moods, obsessive-compulsive traits, paranoid attitudes, etc. "Acute" means the sudden onset of a psychotic episode, relapse after a previous attack, or an exacerbation of a psychotic state, all with predominantly emotional coloring. "Chronic" signifies stabilized or gradually progressing psychoses of the disturbed or apathetic type.) The number and frequency of therapeutic applications is often disregarded. Additional therapeutic measures, such as the handling of the hospital environment, psychotherapeutic, group or individual approach, sedatives or other medications, are left out of the statistical evaluation.

The therapeutic methods are chosen mostly by convenience and availability, with only arbitrary timing, once, twice, or three times weekly, in series of 20, or indefinitely. The "maintenance treatment" often is misused—without any system.

It is true that we are still far from being able to make exact indications for the proper therapeutic measures in individual cases, but there is already a rich body of experience, indicating a certain selectivity of our therapeutic possibilities. Observations and evaluations of all the facts known about the therapeutic methods and the individual patients eventually will help us to come nearer to the proper indication.

Ratings of therapeutic results are made usually a short time after the termination of the treatment. Improved patients are dis-

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charged, often into the environment which "made them sick." The improved, who are not as yet ready for discharge (similar to the unimproved), are transferred to a "chronic ward," where the general therapeutic atmosphere is quite different. In all instances, the patient is soon beyond the therapist's reach. In retrospective, long-term evaluation, too many patients are lost.

The diagnostic criteria are still very dissimilar, constantly changing and varying from one hospital to another. The diagnosis of schizophrenia is in the course of increasing inflation.

Improvement ratings are made very superficially, the behavior aspect being the most common one. The question of insight is very difficult to evaluate in patients deeply disturbed upon admission, or after convulsive treatment, because of the memory impairment concerning their psychotic episode. There is no time for full evaluation, as for instance in the Malamud-Sand rating scale, and the junior staff members are unable to answer respective questions.

In private sanatoria, and in research institutions, where optimum conditions prevail, there is usually a selected type of patient, not representative of the mental hospital population in general. In the former, the therapeutic methods are chosen to comply with the patient's or his relatives' wishes; in the latter, they are selected for purposes of research.

This brief enumeration of only a few of the shortcomings in the evaluation of therapeutic results should suffice to show how difficult it is to get a clear picture of the efficacy of psychiatric therapies.

Of course, the greatest handicap is that we know nothing about the etiology of so-called functional psychoses, and very little about the action-mechanism of our therapeutic methods. In pessimistic reports, this factor is particularly emphasized. As Kalinowsky(8) puts it: "We can only say that we are treating empirically disorders whose etiology is unknown, with shock treatment whose action is also shrouded in mystery." In this writer's opinion, the search for the etiology should go parallel with and not deter further study and use of available therapeutic methods. Psychiatry is not alone in the difficult position of dealing with diseases, the etiology of which

is as yet unknown. Nobody knows the etiology of diabetes mellitus, insulin deficiency being only one aspect of the disturbed carbohydrate metabolism. Houssay's experiments showed clearly how many factors are involved; nevertheless, nobody would hesitate to give insulin and to prescribe a proper diet, knowing that it is not a cure but merely a maintenance treatment, leaving the original disease uninfluenced, but prolonging the working ability and the life of the patient. The same is true of pernicious anaemia, but who knows the etiology? Lack or shortage of the intrinsic, extrinsic, and maturity factors are only the consequences of an unknown etiology. Liver extract is still the best empirical treatment with true lifesaving potentialities.

On the opposite side of the picture are diseases whose etiology is well-known, there being as yet, however, no useful treatment. Poliomyelitis is one of these fateful examples. Again, there are other diseases whose causative agent is known, where therapeutic results are excellent. That general paresis is caused by the spirocheta pallida no one doubts, but the scientifically and etiologically important question is why only a very small percentage of syphilitics become paraparetic. Why, also, another small percentage develop tabes or tabo-paresis is as yet not answered.

The originally highly contested and controversial "nonspecific" malaria treatment gave excellent results, in contrast to the "specific" arsen preparations. Our therapeutic control methods are "nonspecific," the most important being Dattner's cell count, which means nothing else than a nonspecific meningeal reaction.

In the few aforementioned diseases, clinical observations and laboratory findings helped to uncover powerful therapeutic agents, without any etiological knowledge. Similarly, our presently available psychiatric therapies offer us a few well-established facts and valuable clinical observations, allowing us to draw certain conclusions, and giving us a glimpse into the deeper mechanism of these therapeutic methods. (Everything said in this connection applies equally to the various psychotherapeutic methods. There is still heated discussion about the action mechanism of psychotherapy and we continue to wait for a generally accepted "theory." Neverthe-

less, nobody would discard psychotherapy simply because it does *not* attack the etiology.)

Let us enumerate only a few examples. Electroconvulsive treatment could be called nearly specific in cases of involutional melancholy. Six to 10 treatments free the patient of the most horrible mental torment, and as a rule, it never recurs. Thus we are entitled to speak about a cure! That this type of depression eventually would recover spontaneously—if not ended by suicide—does not minimize the merits of the treatment, saving the patient 2-3 years of intense suffering, and mental institutions the almost superhuman effort of preventing suicide. Aside from these facts, however, we have here a classic example of how a deeply disturbed individual can suddenly be rendered "normal," merely by provoking a few epileptic seizures with the help of electricity.

We have here one important starting point of investigation about what happens to the individual through a "nonspecific" epileptic seizure, which brings him out of the deepest depression to a relatively satisfied and happy life. There are a few theories but they do not help us to go further. The theory of the need for punishment does not resist careful observation. If the treatment is carried out properly from the technical and psychotherapeutic standpoint, there is no fear (9) of the treatment, and it is not regarded as a punishment nor is there any recollection. The "death and resurrection" theory can be defended in part, since there is, in fact, a hiatus in memory. Many patients do not recall having had such treatments. There are certain memory defects, which seem to be selective; these cause clouding or forgetfulness of emotionally laden and individually important events. Leo Alexander (10) offers an impressive experimental example. This writer can give one of the many instances which seems to bolster this opinion:

A female patient who complained about loss of memory after ECT was asked the routine questions as to her name, her doctor's name, etc., which she answered correctly. Finally she was asked how many children she had. She mentioned "two" instead of the three she really had. An immediate interview revealed that at the time she had become pregnant with her third child, she had become deeply interested in another man, without having relations with him. She had felt very guilty about

this love, and believed that the third child had been "conceived in sin."

There are a few physiological theories which will be mentioned in discussion of individual cases.

In contrast to involutional melancholy, the involutional paranoid reactions do not respond to ECT. If there is a concomitant depression, this is easily removed, but the paranoid trend remains unchanged. Insulin coma treatment occasionally has a beneficial effect, but often all our methods fail.

The manic-depressive depression does not respond as well to ECT. More applications are necessary, and even if the depression vanishes, there remains often a certain loss of initiative and retardation, unless a hypomanic pseudo-cheerfulness ensues. According to Lewrenz (11), the depressive phase continues its course despite shock treatment, only the actual depression being alleviated. The phasic recurrence of depression remains undisturbed but can be prevented by well-timed, occasional applications. Manic-depressive manic states need the most intensive treatment—usually 2 to 4 daily applications—for a longer period. The phasic recurrence remains uninfluenced.

All these clinical observations, and many others reported in a former paper (12) and collected since, seem to indicate that various methods have certain characteristic actions, influencing different types of reactions. Knowing, however, that there are only a very few clear-cut clinical pictures expressing "pure" depression, "pure" anxiety, "pure" paranoid trends, etc., it seems obvious that a combination of the different methods would give more satisfactory results. To show the validity of this hypothesis is the purpose of this paper.

Of course, in addition to physical treatments, the entire armamentarium of psychiatric treatment methods should be utilized. Essential to the treatment proper is the handling of the atmosphere—the spirit of a hospital—so that everything that is done is done for the benefit of the patient, and the creation of a group attitude with patient, doctors, nurses, and attendants included. Occupational and recreational activities should be planned to give the patient the feeling of anticipation and usefulness, distracting him from his morbid preoccupation.

Psychotherapeutic interviews should be given as regularly as routine examinations and bedside commentaries with a physically sick patient.

This combined therapeutic approach will make the evaluation of a single treatment measure even more difficult. From the therapeutic standpoint, it is only important to know what measures we have to take or combine for the rehabilitation of the patient. An internist would never think of giving digitalis alone to a decompensated patient but would immediately prescribe complete physical and mental rest, diet, and diuretics. He does not doubt the action of digitalis, but knows that without other well-balanced therapeutic measures, the chances of compensation would be very poor or impossible.

The following examples of such combined approaches should illustrate the foregoing ideas, and help to formulate more specific indications. It should be emphasized that the cases described are not typical, but rather random cases, and could be multiplied. They are chosen only because of the various treatments applied with such a final grade of improvement that the patients were able to leave the hospital and resume their former activities.

E.B. is a 43-year-old, married, strictly Catholic, middle-class, white woman. In January 1952 her daughter became pregnant by a colored man. She became very depressed and tearful and completely sleepless. She was in constant fear of "what will come next?" The embarrassing situation of her unmarried daughter was resolved by the adoption of the child, but the patient remained in the same condition.

The following treatments were given: April 1952, sedatives without result; May 1952, ECT, depression relieved, sleeplessness persisted; October 1952, in private sanatorium treated with sedatives without improvement; November 1952, Amphetamine and carbondioxide, without result; January 1953, admitted to the hospital. She was moderately depressed, her chief complaint being complete sleeplessness and the dominant fear of "what will happen next?" The official diagnosis was reactive depression. She received 28 ambulatory insulin treatments with considerable physical improvement and some slight relaxation, but remained sleepless and fearful of the future.

In March 1953 she was given 5 nonconvulsive electric treatments. She slept after the second treatment, and felt completely relieved after 5 treatments. She has been well and satisfied since that time.

The psychotherapeutic interviews revealed a very strong Catholic, middle-class, socio-religious identi-

fication. She never adjusted well to her married life and remained a frigid dreamer. She projected all her frustrated desires into her daughter, and her "what will come next" fears were related more to herself than to her daughter. Hence the prevailing neurotic anxiety.

M.P., a 44-year-old, single male, formerly a noted airforce pilot, had always been a shy, unpretentious, and quiet type, very helpful to others. He never had relations with girls. He was seemingly well-adjusted to his work as long as he had to handle only technical details of his job.

In 1948, after his discharge from the airforce, he became a commercial air pilot. He soon felt inadequate to handle the business side of his work, felt he had been slighted regarding promotion, quit his job, and worked on his own.

In 1950, he became depressed, inhibited, could not talk, stuttered, and felt completely defeated. He lost self-confidence, and withdrew more and more. He received 16 ECT without improvement.

In January 1953 he was admitted to the hospital. He talked only with difficulty, complained that he was not able to express himself, and that he felt completely defeated and isolated, despite his many friends. He never felt that he really belonged to them. The official diagnosis was psychoneurosis, mixed type. He received 14 ambulatory insulin treatments without improvement; 59 insulin coma treatments brought no change in his condition.

In June 1953 he received 12 nonconvulsive electric treatments. After only a few treatments his productions were livelier; he was able to discuss his difficulties in short psychotherapeutic interviews. During the ensuing treatments he became very confused. After the treatment was completed, he regained self-confidence, made reasonable plans for the future, and declared that he "felt better than for the past 15 years." He left the hospital; his condition is still satisfactory.

During the insulin coma treatment the feeling of having been slighted disappeared, but the feeling of isolation and inability to cope with social and economic problems remained a constant source of anxiety, which was relieved by nonconvulsive treatment.

A.W., a 33-year-old, married, white male, had always been very ambitious and active. His school records were excellent. He was well developed but had always felt inferior physically and was afraid of competitive sports.

In 1936, at the age of 19, shortly before graduation from college, he felt unable to finish his studies and believed that he did not deserve all the honors received. He became fearful and anxious, and had the feeling that everyone knew that he was not normal. He had to leave the campus. After a long sojourn in a camp he slowly recovered, but never wanted to return to college. He went into the insurance business and made a brilliant career.

By 1946, he was near the top of his career, when again, as in 1936, he felt inadequate, unable to carry all the responsibilities, became depressed, fearful, extremely tense, and unable to work. He received ECT and intensive analytic psychotherapy. He

improved slowly but never again felt able to resume his former responsibilities. He accepted a minor job, but never felt completely well.

In 1949 he was again given ECT and psychotherapy without any further improvement. All this time he was being treated by prominent psychiatrists.

In 1950, when he had spent all his money, he entered the hospital. He was very tense, worried about the future, was restless and depressed. The official diagnosis was manic-depressive psychosis. He received 36 insulin coma treatments and was considered recovered.

In 1951, a few weeks after his discharge the old feeling of inadequacy, incompetency, and fear of the future returned. He felt unable to work, and believed that everyone could recognize that he was not normal. He returned to the hospital. He was extremely tense and anxious, repeated his complaints incessantly, and was unable to speak about anything else. Under these conditions psychotherapy was impossible. He received 8 electro-narcosis treatments. There was marked relaxation which made him amenable to psychotherapy. Intensive psychoanalytic psychotherapy was carried out for 3 months, until the patient felt completely recovered. His mood became rather hypomanic, he felt full of strength and initiative. After his discharge he had difficulty in finding a job but finally, in association with friends, he founded a new firm. He was very successful, but at the point where his business was running smoothly, he again became discouraged.

At first he felt only somewhat weary, but slowly the old familiar feeling of inadequacy, etc. returned (1953) in a somewhat milder form. Six weeks of intensive psychotherapy brought steady improvement and after 3 months he was active once more, self-confident, and free of all disturbing symptoms.

The writer doubts the correctness of the diagnosis of manic-depressive psychosis. In fact, not one of his "depressions" was relieved by ECT as is the case in periodic depressions. His body build is pyknic, his character syntone, but his difficulties were basically psychoneurotic, receiving their pattern from his psychosomatic constitution. His difficulties always started when he had to take greater responsibilities, or when he was near a full success, and were characterized by marked feeling of inadequacy and the fear that his limitations would be discovered. Psychoanalysis uncovered a very strong mother attachment with a marked Oedipus fear causing his disabling anxiety reactions.

M.K., in June 1951, a 28-year-old, single, white female, office secretary, had gradual onset of fatigue, ideas of reference, and lively hallucinations. She believed that her married employer gave her to understand in various ways that he is in love with her, and she herself fell in love with him.

In October 1951 she was admitted to the hospital, complaining bitterly about her hallucinations, which were at this time rather complimentary. Official diagnosis: dementia precox, paranoid type.

Insulin coma treatment was started, but after 30 comas there was no improvement, and she was

given 6 ECT and 9 Metrazol shock treatments during the insulin comas. She corrected her ideas about her employer stating that she is not sure whether he really was in love with her, and admitted that she might have misinterpreted some of his actions. Her hallucination disappeared for a while but soon returned, this time with derogatory contents, criticizing her severely for being in love with a married man.

The lively derogatory hallucinations continued. In March 1952 she received 20 ECT at a rate of 3 treatments weekly. There was a slow but steady improvement. The hallucinations disappeared completely. After a year and a half she is still well, working regularly.

In this case the insulin coma treatments corrected the paranoid ideation. The complimentary hallucinations changed to derogatory ones expressing her strong guilt-feeling. ECT with concomitant psychotherapy was able to remove her feeling of guilt, and the hallucinations disappeared.

V.J.B., a 30-year-old, separated, white female, diagnosed dementia precox, mixed type, in May 1951, had a sudden onset of persecutory ideas, hallucinations, and depression. In June 1951 she was given ECT with no improvement, and again in August with no results.

In November she became extremely restless, noisy, and disturbed, very resistive and depressed with strong suicidal trends.

In December 1951, 29 double electric shocks (58 seizures) were given with marked improvement. She was soon able to be discharged and is still in excellent condition.

Simple ECT at irregular intervals were not able to alleviate the deep depression precipitated by the legal separation from her husband. Double shocks were necessary to eliminate the overwhelming emotion of helplessness and rejection and thus make her able to face reality in another emotional setting.

D.V., a 32-year-old, married, white female, at the age of 20 was ill for more than a year with an undiagnosed sickness, characterized by headache, fatigue, and somnolence.

In October 1950 she was admitted to the hospital with complaints of fatigue, sleeplessness, and depression. She worried about world affairs and made a suicidal attempt. Official diagnosis: dementia precox, mixed.

In October 1950, 19 ambulatory insulin treatments were given with no improvement.

After 14 electronarcosis treatments in December she was considered much improved until she again attempted suicide.

Fifteen ECT in January 1951 were followed by slight improvement. In March 1951 she was given 60 insulin coma treatments without improvement. She became more depressed and made violent attempts of self-destruction. After continuous sleep treatments for 7 days with Dial (Lutz, J.) (14) she showed marked improvement, and in July was discharged from the hospital.

In January 1952 she again complained about fatigue, sleeplessness, and depression and in February was readmitted to the hospital in an extremely

agitated, violent, and destructive state. She threw herself on the floor, her conversation was sarcastic, disconnected and profuse, with some allusions to a religious mission she had to carry out.

ECT was given, with occasional, temporary improvement. By October 1952 she had received 73 ECT. Her condition remained unimproved, severely disturbed. She became a very serious nursing and feeding problem.

In December 1952 she was given continuous sleep treatment for 8 days with Dial resulting in marked improvement. She is still at home, and in very good condition.

This patient was twice relieved of her deeply disturbed condition by continuous sleep treatment after all other treatment methods failed. Whatever the action-mechanism of the continuous sleep treatment is, predominantly psychic or somatic, presumably both, it is certain that in this case only this treatment was effective.

CONCLUSIONS

When contemplating the aforementioned cases, we feel justified in deducing that, from the clinical aspect, it seems that our various psychiatric treatments have a certain selectivity in their action: ECT especially relieves all forms of depression, and, in general, curbs or discharges overwhelming emotions remarkably, with the exception of anxiety, which is best relieved by nonconvulsive electric treatment (13) (19). Hence, ECT is, to a certain degree, useful in all types of mental diseases. According to Davidson (20):

Emotions are regarded as the motor end of affectivity.

To Bleuler (21),

Affectivity dominates all other functions of the psyche; in disturbances in any sphere of the personality, it is the disturbed affective mechanism which first creates manifest symptoms.

Noyes' (22) definition is:

It is not the ideas themselves which are important factors in determining the patient's mental content or his form of behavior, but the affects that are attached to his ideas.

If we accept these definitions of emotions and affectivity, it is then quite reasonable that if ECT relieves the emotional load, it is able to remove a number of psychotic symptoms. ECT does not, or only very seldom, correct paranoid trends. It is able to control emotional outbursts of paranoids, but influences paranoid ideas only very poorly, possibly because these are already intellectually fixed. Here, the disintegrative

action of insulin coma gives the best results, attacking first the cortical cells. Knowing the phylo- and ontogenetically youngest elements to be the most vulnerable, what was found by Ries and Berman (23) is easily understood: that the disintegrative effect of insulin shock is greatest in poorly fixed habits (that is, the newly acquired paranoid trend), thus better learned are better fixed and are not destroyed as easily nor to such an extent (previously learned intellectual abilities). Thus, the inefficacy of insulin coma in catatonic symptoms is easily explained and the combination of ECT and insulin coma appears indicated when strong emotional reactions are present.

It remains to be explained why ECT does not influence anxiety and why nonconvulsive therapy does. Leo Alexander (13) gives a brain-psychopathological explanation, as cited above. It is very suggestive but remains hypothetical, as long as we have no proof of an elective cortical or subcortical action in these different modes of electrical applications. Further studies of localized brain metabolism might give us the answer. Psychoanalytical interpretations are more apt to shed some light upon this problem.

When psychotic manifestations are regarded as regressive tendencies, and neurotic ones as the consequences of fixation, then psychosis is a flight from an intolerable situation into an earlier and more protective level of existence, and neurosis is a constant struggle with higher requirements from a fixed juvenile level. "Free floating anxiety" is an expression of the feeling of inadequacy and helplessness. If this is so, then ECT can remove the fear which is created by an actual or imagined situation and so help to restore the ability of functioning on the former higher level of integration. Not so with neurosis, where there is a constant situational fear, and because of fixation, there is no higher level of integration of emotional and intellectual abilities since the emotional needs remain immature. Nonconvulsive treatment apparently reduces the pressure of the super-ego and helps the neurotic to accept his infantile role. In fact, it is surprising to see how eagerly neurotics accept the transference situation, after nonconvulsive treatment, and with what childish enthusiasm they participate in productive-confessional-psychotic-

therapy. Nonconvulsive treatment has a manifest euphorizing effect; patients often become hypomanic, as if they had been relieved of a heavy load they had been forced to carry.

Double electric shock is indicated when very strong emotions cannot be mastered by simple shock, and a deeper obnubilation is necessary to disrupt the vicious circle.

Continuous sleep treatment brings the patient to the deepest level of regression, at least to the diaper age, with occasional positive Babinsky, and so makes possible a new reintegration, freeing him from an emotional and intellectual "dead end." It is well known that even a short, restful sleep often makes us able to see things in a different perspective.

Despite the very extensive use of barbiturates, we still have no complete knowledge of their action. Himwich(15) relating Quastel's extensive studies and experiments, states:

The metabolism of the brain was depressed more than that of other tissues that he had studied, and even more important that the barbiturates interfere with the oxidation of carbohydrates and carbohydrate split-products, but not with non-carbohydrates. . . . The depression of the brain metabolism is not adequate by itself to explain changes in behavior wrought by the barbiturates.

Barbiturates interfere directly with nervous activity, and the action on the hypothalamus is not well enough understood. Klaesi (16), when introducing the continuous sleep treatment, thought that the helplessness and lowered awareness created by Somnifen aided in gaining psychotherapeutic rapport. This hypothesis was the basis of the widely used so-called narcoanalysis and synthesis, with sodium amytal and other short-acting barbiturates. Horsley(17) believed that the action of the barbiturates on the hypothalamus "would explain the peculiar hypnotic-like effect of some barbiturates." This psychotherapeutic effect was widely used when the Somnifen continuous sleep treatment was the only hopeful way to a psychotherapeutic approach of schizophrenics. There is no doubt that the Somnifen and other similar methods, using long-acting barbiturates, at times gave excellent results. It is this writer's opinion that it was abandoned

not because of the poor results, but more because of the burden imposed upon the doctors and nurses because of the need for 24-hour alertness. According to Wortis(18), "The use of sleep treatment is increasing everywhere and has at last begun to evoke greater interest here." It is experiencing a lively revival in a new form as artificial hibernation.

Reevaluating clinical experiences from such a selective point of view, it would seem quite natural that only a restricted number of patients would respond to a single therapeutic method. In most cases various mechanisms are at work creating the psychotic symptoms, thus they eventually may yield to combine treatments.

Our unsatisfactory diagnostic labels reveal nothing about the genesis or dynamics of the individual disease. A catatonic is called a catatonic whether there was a sudden onset in a formerly apparently balanced personality, or whether the catatonic attack was only a culmination of a long-standing schizophrenic process. Yet, what a difference therapeutically and prognostically! Such discrepancies in our diagnostic categories follow us through the whole gamut of the nomenclature.

We do not know the etiology of so-called functional psychoses, and it is to be feared that we will not, as long as we indulge in the illusion that our diagnostic entities are pathogenetic entities. Only through further, more intensive clinical observations and concomitant laboratory studies of the individual patient, and the meticulous consideration of pure therapeutic results and failures, will we be able to come closer to a real medical solution of our psychiatric problems. Cases like the one mentioned by Bond(5):

. . . who for 10 years has been in the hospital as the most obvious, regressed, typical schizophrenic: after a course of insulin he became a normal-appearing, pleasantly talkative individual for a week and then regressed again.

We have all observed similar cases, with or without insulin, but no one as yet has given a satisfactory explanation or conclusion that would force us to reconsider our conception of "dementia," "pseudodementia," "disintegration," "dissolution of personality," and all the other expressions with the underlying

implication of irreversibility. And if there is no "irreversibility," it is up to us to find ways and means of reversing such conditions.

The present, much publicized "Total Push" method is perhaps the beginning of a new therapeutically oriented psychiatry. It is rather strange that the "Total Push" method had to be invented and discussed at all. For a surgeon, all the pre- and postoperative measures to meet all possible physical and emotional needs of the individual patient as to nursing care, medication, diet, comfort, etc., are part of the routine procedure, without which he would not undertake the operation. Why must it still be proved that psychiatric therapeutic measures—shock treatment, etc.—should be accompanied and followed by a routine that would assure meeting all the needs of the patient for a successful rehabilitation? The psychiatric patient has a very vulnerable convalescent period too. He needs every support to enable him to face reality with all of its exigencies. The "Total Push" is only the first step in treating the whole individual and not the disease—a condition already axiomatic in other fields of medicine.

We fully recognize that our present-day psychiatric treatment methods, and our knowledge of how to utilize them, are limited, but they give us results which open many avenues for hopeful research. They also give us considerable insight into further development and a better understanding of our problems and are, even now, undoubtedly usable for the great benefit of our patients.

SUMMARY

Clinical observations led the author to the following conclusions:

1. Present-day psychiatric treatment methods have no specific, but have, to a certain degree, selective actions.
2. Electroconvulsive treatment relieves all forms of depressions and is able to alleviate emotional pressure.
3. Nonconvulsive electric treatment relieves anxiety and thus makes the patient amenable to productive psychotherapy.
4. Insulin coma treatment acts on an ideational level, thus enabling the patient to correct paranoid ideas.

5. Double electric shock treatment is necessary in highly emotionally disturbed states.

6. Combined treatments are indicated when different mechanisms are at work in creating psychotic symptoms.

The author believes that these and similar clinical observations open many avenues to fruitful research, and that proper indications for treatment methods, together with satisfactory management of the hospital environment, would greatly improve our therapeutic results.

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ELECTROCONVULSIVE THERAPY IN ELDERLY PATIENTS

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With the mounting numbers of patients admitted to the senile wards of mental institutions geriatric psychiatry is gaining increasing importance and greater experience has accumulated concerning the psychiatric difficulties in later life. Considerable change has taken place in our thinking about the subject.

It is well known that the brains of the aged people show characteristic changes. The relationship of these changes to the psychotic reactions has interested many investigators. While it is generally accepted that old people with intellectual deterioration show arteriosclerotic or senile brain changes or both, it has been shown that equally severe changes may be found in old people without significant intellectual deterioration. Gellerstedt (1) reported in 1933 senile brain changes in old people without psychoses; Wartman (2) in the same year found in autopsy material that 91% of the men and 84.5% of the women over 60 were suffering from cerebral arteriosclerosis, a number far in excess of the incidence of mental illness. In 1937 Rothschild (3) stated as the result of careful pathological studies that there was lack of correlation between histological changes and intellectual impairment and suggested the need for studying psychological aspects of old age. Robinson (4) in a discussion of geriatric psychiatry in 1941 urges that a "straight pathological interpretation" of mental symptoms in the elderly should not be made as he finds a high incidence of reversible type of psychosis, while the pathological changes described are obviously irreversible. He considers "emotional disturbances by far the most frequent factors to upset the limited adjustment of the person with cerebral arteriosclerosis," and found that a great number of psychoses of the later years respond well to active psychiatric therapy. Since then a number of reports of successful treatment of psychoses in old age have appeared prov-

ing that many psychotic reactions of the elderly are reversible or "functional." While they are the response of the organism to psychological and physiological stresses of aging, they are not the inevitable result of senile or arteriosclerotic brain changes. They often occur in the absence of significant intellectual deterioration and in many respects are not essentially different from psychotic reactions in the younger age group. Leading in frequency among the psychotic reactions in the senium are psychotic depressive reactions, but manic-depressive reactions, paranoid states, and schizophrenia-like pictures also are frequently seen.

In these circumstances it appeared promising to try electric convulsive therapy in suitable cases of the senile group and indeed a considerable number of authors have reported its use in aged patients. All concur that it is effective and, contrary to general opinion, carries very little risk. Myerson (5) already in 1941 reported successfully treated depressions in elderly patients. Evans (6) in 1943 had treated 17 patients over 60 and 5 patients over 70 with EST. N. P. Moore (7) treated old people with good results and stresses the importance of maintenance treatment. Mayer Gross (8) had excellent results in 76 patients over 60. In 1947 Matthew Moore (9) reviewed a large series of patients of the Philadelphia Psychiatric Hospital with considerable pretreatment physical pathology and states that "some of the contraindications can now in the light of experience and judgment be eliminated." In the same year Gallinek (10) reviewed the subject and added 18 cases of his own. Robinson, who had been one of the pioneers in the field, recently added a report on 6 patients, all over 80 years of age, treated with resulting full remission of psychiatric symptoms. Kalinowski (11) states in his standard textbook: "Age should not exclude patients from the benefit of the treatment."

In spite of all this Gallinek's statement that electric convulsive therapy during the

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senium is still carried out on a limited scale holds true even today. For this reason we feel justified to review a series of cases treated at the Boston State Hospital from January 1948 to December 1953. In this series conventional electric shock was used without modification with curare-like drugs. Our group contains patients from 65 to 83 years of age with an average age of 71.3 years. It contains all 112 patients treated but is selected insofar as only 3 of the patients subjected to EST showed significant mental deterioration beyond what was expected at their age. It is often difficult to determine the intellectual level in a severely psychotic patient but observation of ward behavior and detailed history usually allowed us to make a satisfactory estimate.

Seventy-six of these patients were females and only 36 were males. Forty-six had previous mental breakdowns. Sixty-six had their first attack of mental illness at an age past 65.

Table 1 shows that 88 of the 112 patients treated or 78.5% were able to leave the hospital. Thirty-three of the recovered patients had 2 or more admissions during the time period considered but as a rule relapses also responded readily to treatment. More relapses occurred in the group who had had attacks of mental illness before the age of 65 (the manic-depressive group). More patients among the group that never left the hospital had their first attack of illness at age 65 or over, possibly reflecting more organic involvement in this group.

Figure 1 illustrates the length of hospitalization per admission in the patients who were able to leave the hospital. It shows that in about half of the admissions hospitalization was less than 2 months but it should be noted that one patient who was first admitted at age 70 and whose psychosis was characterized by auditory hallucinations and delusions

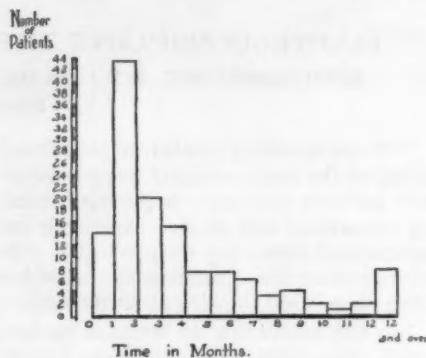


FIG. 1.—Length of hospitalization per admission in 88 patients who left hospital.

stayed at the hospital for 14½ months and still recovered. She recently had her guardianship removed at age 72.

Figure 2 shows the number of treatments given per admission in the recovered patients. While we concur with Myerson that many patients, especially depressed ones, showed significant improvement already after 3 treatments, more were usually given to maintain results. Patients with paranoid or schizophrenia-like reactions required more treatments than depressed ones to obtain remission. After gaining more experience we gave 3 treatments the first week, 2 the second, and then 1 weekly as a rule. In this way we usually avoided significant memory defects

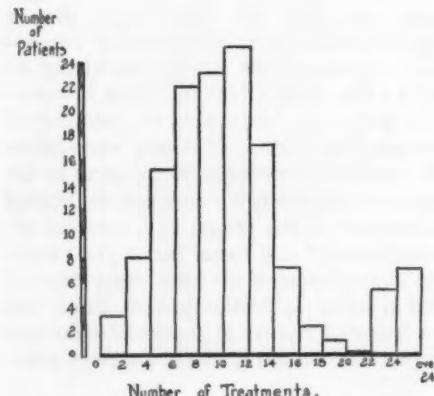


FIG. 2.—Number of treatments per admission in 88 patients who left hospital.

TABLE 1

| | First attack under age 65 | First attack age 65 and over | Totals |
|-----------------------------|---------------------------|------------------------------|--------|
| Treated | 46 | 66 | 112 |
| Left hospital..... | 43 | 45 | 88 |
| Relapsed | 23 | 10 | 33 |
| Leaving hospital again..... | 19 | 10 | 29 |
| Never left hospital..... | 3 | 21 | 24 |

and confusion. When these symptoms occurred, they were reversible and of short duration. In the few cases in which we discontinued the treatment because of confusion we found that when the confusion subsided usually the abnormal mental state had subsided also. In some cases after a short interruption we resumed treatments once a week without untoward results. As had been recommended by N. P. Moore and Mayer-Gross, 7 patients, because of a tendency to relapse, were given ambulatory treatments after leaving the hospital. One of them, 73 years old at beginning of the treatment, received the maintenance treatments every week in the beginning. Gradually the intervals were lengthened to one treatment every several months. This patient has stayed out of the hospital since 1950. She has had no more treatments since November 1952. Another patient now 71 years old has been coming by herself for treatment every 3 weeks and lately every month since February 1952. One patient was receiving weekly treatments for 3 months after release and then stopped. She has stayed well since 1952. Three patients are still on maintenance every 2 weeks since May, June, and July 1953 respectively.

Table 2 shows the time that the recovered patients have stayed out of the hospital since their last release on visit. We want to mention that we have had recent contact with all but 8 patients reported on.

As expected at this age group many patients showed physical pathology as detected in their preshock work-up. Encouraged by reports by Evans, Gallinek, and especially Matthew T. Moore we weighed these against the severe psychiatric disability and accepted them as a calculated risk.

Every patient was subjected to the usual

TABLE 3
PRETREATMENT PHYSICAL PATHOLOGY

| | |
|--|----|
| Clinical abnormalities of the heart..... | 15 |
| Abnormalities in electrocardiogram (includes 3 with old myocardial infarction, 9 with bundle-branch block, 6 first-degree AV block, 5 with ventricular premature beats)..... | 36 |
| Elevated blood pressure (up to 220/110)..... | 34 |
| Albuminuria | 11 |
| Diabetes mellitus | 4 |
| Old cerebral-vascular accident | 3 |
| Bronchiectasis | 6 |
| Healed tuberculosis | 2 |
| Lung cyst..... | 2 |
| Diaphragmatic hernia | 2 |
| Inguinal hernia | 1 |
| Healed fractures (lumbar vertebra, ankle, hip)..... | 3 |
| Arthritis, hypertrophic, of spine..... | 3 |
| Arthritis, hypertrophic, of knee..... | 3 |
| Nephrectomy | 1 |
| Resection of rectum—colostomy..... | 1 |
| Parkinsonism | 1 |

work-up including an electrocardiogram and a medical consultation. We excluded from treatment for physical reasons only recent coronary occlusions and decompensated heart disease. On the advice of our cardiologist, patients with first degree A-V block or bundle-branch block were given 1.2 mg. of atropine sulfate parenterally one-half hour before treatment and those showing premature beats received 0.2-0.3 gm. of quinidine sulfate orally 60-90 minutes before EST. Patients with bronchiectasis were prepared for treatment with antibiotics. Most patients took the treatment well. The exceptions are reported on below.

Among 1,329 electroconvulsive treatments we had 4 compression fractures of dorsal vertebrae. All of these fractures healed without complications. In one patient treatments were resumed after a month's interruption without ill results. No other bones were fractured. It should be mentioned that 4 other patients of our group sustained fractures in minor accidents indicating that they had a significant amount of osteoporosis. The fact that they tolerated EST without complication is used as an argument that the fractures during EST are not so much dependent on brittleness of the bones as on muscle bulk which is very much decreased in the senile age group. We concur here with N. P. Moore who states that "elderly patients are less liable to fractures than the younger athletic group."

TABLE 2
TIME ELAPSED SINCE LEAVING HOSPITAL IN 28 PATIENTS NOW OUT OF HOSPITAL

| Months out of Hospital | Number of Patients | Percentage of Recovered Patients |
|------------------------|--------------------|----------------------------------|
| 0-6..... | 24 | 100 |
| 6-12..... | 11 | 70 |
| 12-24..... | 18 | 55 |
| 24-36..... | 11 | 32 |
| 36-48..... | 8 | 18 |
| 48 and over..... | 6 | 7 |

Ten patients of our series died while still in the hospital. Six of these deaths, occurring 19 days to 12 months after the last treatment, were from intercurrent disease or injury, and are not considered related to the electric shock treatments. In one case EST was responsible for death and in 3 other cases possibly contributory.

J.W., aged 72, is the only patient who died as an immediate result of EST. He had a long history of alcoholism and was one of the 3 patients who were treated in spite of memory defects. He was very overactive, boisterous, and combative. After 7 months of conservative treatment he was started on EST. He was in good physical condition and no difficulty was expected. His behavior improved greatly with treatment but every attempt to discontinue it was followed by increased disturbance and he had to be maintained on EST from 2/2/51 to 3/10/52. Eight minutes after his 51st treatment he suddenly stopped breathing. Autopsy was performed and revealed coronary arteriosclerosis with thrombosis and an old myocardial infarct. The coronary arteries are described as showing obliterating disease and the lumen was frequently narrowed to pin-point size. In retrospect one may wonder how this patient tolerated 50 treatments without apparent disturbance.

L.D., a 68-year-old man with clubbing of the fingers due to pulmonary fibrosis, emphysema, and bronchiectasis developed a fever the day after his 10th treatment and died 8 days later with abundant purulent expectorations. Autopsy was not permitted. Treatment was undertaken only on account of his severe agitation. A year previously he had had 6 EST at another hospital without ill results.

M.B., a 69-year-old woman, while in the hospital had an episode of congestive failure compensated by digitalis. She had left bundle-branch block and was fibrillating. Prognosis was considered not good from a cardiac standpoint. Because of her extreme depression treatment was undertaken after the heart rate came down to 80. Treatment had to be interrupted for a month after 7 treatments because of bronchopneumonia. After her 14th treatment, she again went into failure and died 2 weeks later of cerebral thrombosis and bilateral bronchopneumonia.

T.M., aged 65, had been successfully treated for subacute bacterial endocarditis 8 years before admission and had since been hospitalized for several episodes of congestive failure. X-ray showed enlarged left ventricle and EKG showed ventricular premature beats. After the 12th treatment he showed edema of legs and dyspnea. In spite of treatment he died a little more than a month later. There was no autopsy.

These last 2 patients with severe heart disease might have developed another episode of failure even without the treatment, but we must accept the possibility that electric shock was a contributing factor. Kalinowski and Hoch state they saw no patient in whom cardiac disease was aggravated by EST.

SUMMARY AND CONCLUSIONS

Mental illness in patients over 65 years is not necessarily "organic" and irreversible. So-called "functional" psychoses in the elderly respond well to electroconvulsive therapy and a high percentage of cases can be restored to the community at the pre-illness level. A group of patients treated with conventional electric shock at the Boston State Hospital from January 1948 to December 1953 is reviewed. In this group of 112 patients from 65 to 83 years of age, with an average age of 71.3 years, 78.5% were able to leave the hospital and 55% of them are out for more than a year. Relapses occurred in 37.5% of recovered cases but most of them again responded readily to treatment.

One patient died as an immediate result of treatment. In 3 patients who suffered from severe physical illness electric shock may have contributed to their deaths. In these patients their life expectancy was very poor even before treatment and their severe physical illness rather than their age was responsible for the unfortunate outcome. In aged

TABLE 4
DEATHS CONNECTED WITH EST

| | Name | Age | No. EST | Time after Treatment | Cause of Death |
|--------|------|-----|---------|----------------------|---|
| 1..... | J.W. | 72 | 51 | 8 minutes | Coronary arteriosclerosis with thrombosis; old myocardial infarction |
| 2..... | L.D. | 68 | 10 | 8 days | Bronchopneumonia; ? lung abscess |
| 3..... | M.B. | 70 | 14 | 14 days | Bronchopneumonia bilateral; arteriosclerotic heart disease with congestive failure; cerebral thrombosis |
| 4..... | T.M. | 65 | 12 | 37 days | Congestive heart failure; RHD |

people in a reasonable state of health the risk involved appears to be minimal.

The occurrence of only 4 fractures in 1,329 EST's appears to indicate that diminished muscle bulk compensates for the seemingly increased risk of osteoporosis and makes the use of curare-like drugs unnecessary.

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ELECTRIC SHOCK TREATMENT

A "MUST" FOR CHRONIC PATIENTS IN MENTAL HOSPITALS¹

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There is usually a resistance in our profession to use of a new drug so long as it is not generally accepted. Who does not know the difficulties experienced by Dr. Carl Ludwig Schleich at the turn of the century in trying to convince the professional world of the value of infiltration anesthesia?

Active treatment in psychiatry is still young. We must admit that we do not yet know how and why shock treatments produce their favorable results. I would like to call EST the opiate for the centers of our automatic nervous system.

Up to two years ago, one could not find much encouragement in the literature for giving EST to elderly patients. There was a general fear of complications, of a tremendous increase in the number of fractures frequently seen in younger patients who received EST. There was fear of bad effects on the heart and cardio-vascular system, which, although not substantiated, is still very prevalent. The latest literature, however, shows a great change in attitude. Kalinowsky and Hoch, in their 1952 edition of *Shock Treatments, Psychosurgery and other Somatic Treatments in Psychiatry*, state:

Our previous impression that EST has no indication where senile changes are the cause of the depressive manifestations must be replaced by the statement that wherever a depressive element is present EST should be applied. It has been shown that the danger of suicide as well as the danger of psychotic exhaustion in untreated cases is definitely greater than the alleged risks of convulsive therapy.

This statement is in complete conformity with our experience on our geriatric female service in the last two years. In August 1952, a more active treatment on our so-called "chronic wards" was started.

For our first treatments in 1952, we selected a group of patients between 70 and 80 years of age who had been hospitalized for years and continued in a pitiful and

desperate condition. Some had been for years in camisole or seclusion, some were banging the doors or screaming if not sedated. Some were tearing up their mattresses and clothes, some were very depressed, were feeding problems or in a catatonic stupor. Let me mention only a few:

O.S.—This 74-year-old woman was committed to Patton in 1937 with a diagnosis of dementia praecox paranoid type and was transferred in 1941 to Camarillo. On 14 pages of continuous notes, it was stated that she was in seclusion or camisole because of suicidal attempts. She received 6 EST, 2 each week, in September 1952; since that time she has been a good detail worker and it would be difficult to call her psychotic.

A.L.I., age 71, a voluntary patient since February 1950, with a diagnosis of psychosis with cerebral arteriosclerosis. She is a controlled diabetic. In May 1952 she became so disturbed that she had to be put in seclusion and mostly in camisole as she was tearing up her bedding and clothes, was drinking her urine, and scattering her feces all over the room. Sedation and hydrotherapy were without beneficial results. She had a series of EST in August and September 1952 and responded very well; she is able to go on repeated definite leaves since and gets at great intervals 1 to 3 EST when she gets excited or depressed.

I.C., 72 years old, was committed in May 1952 with a diagnosis of senile psychosis, simple deterioration. She was very depressed and delusional, refused to eat, was picking continuously on herself, couldn't recognize anybody, and went down to 48 pounds. EST was started in December 1952 and after about 6 treatments she began to eat and became well oriented in all spheres. She went on repeated definite leaves and then on convalescent leaves 3 to 5 months and was returned each time because she became somewhat depressed; however, she always responded well to 6 to 8 shock treatments and was able to go out again.

In the senile or cerebral arteriosclerotic patients psychotic symptoms may not be caused by the organic changes, but by emotional conflicts, and the same can be said of the psychosis in other organic diseases. Besides patients with psychosis due to senility, cerebral arteriosclerosis, involutional reactions, we treated a few with organic diseases like multiple sclerosis, Parkinsonism and epilepsy, also conversion hysteria.

It was our impression that in these cases

¹ Read April 14, 1954, at the staff meeting of the Camarillo State Hospital, Camarillo, California, F. H. Garrett, M.D., Superintendent and Medical Director.

the symptoms of the disease were often provoked or aggravated by emotional strain or stress, maybe because the patients could not express themselves clearly enough, or because their wishes were not complied with or because of desire for attention or at any rate as an overlap of psychogenic signs on the organic base.

We have been treating 9 cases of epilepsy. One had continuous epileptic attacks for 7 days unrelieved by heavy medication. After receiving 3 EST, she had only 6 attacks during the following month and went on definite leave twice. All epileptics are having fewer attacks and are easier to handle since receiving EST. We treated 2 cases with Parkinson disease; one of them, N. B., a chronic patient exhibiting tantrums and marked depression, who was on our sickbay for a long time. After receiving a full series of EST, she went on repeated definite leaves for about 6 months and is on convalescent leave now for 4 months.

Two cases of multiple sclerosis, B. U. and S. B., are emotionally easier to handle since receiving EST.

Of two patients with conversion hysteria, one, A. D., who didn't talk or eat and became progressively weaker, responded very well. She gained about 15 pounds after receiving EST and is pleasant, cooperative and a good worker on the ward. Another patient was treated on sickbay for a considerable period. She had a distended abdomen due to retention of urine and had to be catheterized daily; after receiving 3 EST she urinated naturally and did well thereafter. We treated several very depressed cases who refused to eat, one because she believed that she couldn't swallow. They improved very well on EST and went home on convalescent leave. We also are treating, with very good results, patients with old fractures (two of them with pins in their hips) and a few who are paralyzed because of strokes about 8 months prior to starting their treatments.

The good response encouraged us to start more intensive treatment in February 1954 on our most disturbed ward with a population of 100 patients. Forty-four of these patients are getting EST. There was marked improvement within 4 weeks. Before, we had 4 to 6 patients daily in camisole or in seclusion. During the whole month of March,

we had only one patient for 2 days in camisole and one patient for one night. Before, we were artificially feeding an average of 20 patients a day, now only 3. Before, we gave 165 sedations by hypo in one month, now we gave only 35 sedations during the month of March. Besides these very tangible results, there were also quite general ones. The whole atmosphere on these wards became more peaceful, screaming and pounding at the doors, acts or attempts of self-destruction became very rare. There is no question that many of the more quiet patients became very upset and unruly because of the psychotic behavior of the very disturbed ones. This infectious element is gone. More of the attendants' time can be spent now for the benefit of the patients. They can discuss their problems with them and help them to become readjusted. Before they had to spend their energy in protecting the other patients and often themselves against some unforeseen outburst of an unruly and disturbed patient. On 3 wards with a population of about 300 patients, we were able to send on convalescent leave in the last 1½ years, 85 patients; a number which we are proud to say compares very favorably with the record of the so-called "active treatment wards," and this was accomplished with a far less numerous personnel.

Since August 1952, we treated altogether 249 patients and gave over 6,000 EST. These patients were selected from a population of about 600 chronic, mostly senile patients of whom at least 180 were bed patients without severe psychosis—just old people in need of general care.

We had only 8 fractures during these treatments; on the other hand, we had during the same period over 90 fractures on our different wards because the patients fell or were involved in fights. Five patients who received EST and had no fractures during their treatment sustained fractures in falling off their chairs or to the ground. This substantiates my opinion that actually EST is less a risk to the bones of old people than the accidents of normal life.

The fear of endangering the cardio-vascular system might also be overemphasized as illustrated by the following case:

Mrs. O'C., a 70-year-old white woman diagnosed psychosis with cerebral arteriosclerosis had gone

on indefinite leave in July 1953. She had very much improved following a series of EST. She returned in January 1954 in a very depressed state. She was also in acute heart failure. After compensating her heart, she remained in a very depressed condition, refused to eat and was going down hill rapidly, so that we notified her husband to come to see her. Realizing that she seemed hopeless, we gave her 3 EST. After the first treatment she started to eat, became cheerful, her heart stayed compensated, and the patient again went on convalescent leave.

Table 1 gives the results and age distribution of our patients who received EST.

Of the very much improved (51 patients), 41 went home on convalescent leave and the

TABLE I
RESULTS AND AGE DISTRIBUTION OF EST PATIENTS

| Age group | No. | n. changed | Im- proved | Much im- proved | Very much im- proved |
|--------------|-----|---------------|---------------|-----------------------|-------------------------------|
| Above 80 ... | 25 | | 19 | 5 | 1 |
| 70-79 ... | 66 | 4 | 42 | 9 | 11 |
| 60-69 ... | 83 | 7 | 38 | 15 | 23 |
| 50-59 ... | 46 | 6 | 23 | 7 | 10 |
| Below 50 ... | 29 | 4 | 11 | 8 | 6 |
| Total | 249 | 21 | 133 | 44 | 51 |

others could leave if they had someone to take them out.

After all these experiences, it is hard for me to understand why many doctors are still afraid or hesitate to give EST. Every organic damage is certainly negligible compared with the destructiveness of severe and enduring mental illness. No doctor would hesitate to give a patient with a gall bladder attack or renal colic a hypo, or perform an operation even for a patient of advanced age. In this same sense, no doctor should hesitate to give EST to a very disturbed or desperate person because of the slight chance of a complication. Calculated risks are justified. From our experience we feel that EST is rather a must than a possibility on the chronic wards of our mental hospitals.

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STELLATE GANGLION INFILTRATION IN ORGANIC PSYCHOSES OF LATE LIFE

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One of the important factors in the development of the organic psychoses of late life is the diminished blood supply of the brain. This has long been recognized in psychosis with cerebral arteriosclerosis. It seems that impaired cerebral blood flow also plays a role in the development of senile psychosis.

Freyhan and co-workers(6) examined the cerebral blood flow of 10 patients by the nitrous oxide method; 6 of those patients suffered from psychosis with cerebral arteriosclerosis, the other 4 from senile psychosis. There was a significant decrease of cerebral blood flow in all 10 patients.

Both conditions exist simultaneously and it seems reasonable to assume that such patients would benefit from improved cerebral blood circulation.

It has been suggested by various authorities that stellate ganglion block increases the cerebral blood circulation. In this paper, case histories of 8 patients who were treated by this method are presented. All of these patients suffered from organic psychoses of late life.

Stellate ganglion block by procaine was first introduced by Mandl in 1925(9) for the treatment of angina pectoris. Later on, it was given to patients suffering from various neurological conditions(7, 8, 10, 11) on the assumption that the stellate ganglion block would dilate cerebral blood vessels. Mandl applied stellate ganglion infiltration by the posterior approach. Subsequently, the anterior, anterolateral, and external approach as well as various modifications were introduced(12).

Risteen and Volpitto(11) reported on the result of stellate ganglion block in a group of 275 patients, all of whom had been suffering from neurological illnesses caused by various disorders of the brain. An important finding was that hemiplegic patients showed improvement in motor function as the result of relaxation of muscle tone.

Karnosh and Gardner(8) reported on 500 patients who either had procaine block of both stellate ganglia or were subjected to re-

section of the cervical ganglia. Persons affected with almost every type of organic brain disease as well as patients suffering from melancholia were included in this group. The authors were impressed by the fact that 60% of the patients showed improvement in mood. A number of patients recovered from severe headaches, became less irritable, showed loss of anxiety, and slept better. The authors suggested that the effect of stellate block might be caused by improved blood supply of the thalamus.

Gilbert and Takats(7) performed stellate ganglion block on 25 patients with cerebral embolus and thrombosis and obtained good results in 19 patients. Naffziger and Adams (10) performed stellate ganglion block on 155 patients with cerebral thrombosis, embolus, or vaso-spasm and claimed neurological improvement in a number of patients within 5 to 10 minutes after infiltration. Aymes and Perry(1) reported on 44 cases and stated that stellate block is so far the most effective treatment of acute cerebral embolism and thrombosis.

The patients discussed in this paper received between 6 and 16 bilateral stellate ganglion blocks during a period of several weeks; these blocks were given 3 to 4 times weekly. The anterior approach was used and about 12 c.c. of 1% procaine were injected in each ganglion; every infiltration was followed by Horner's syndrome, i.e., constriction of pupils and narrowing of palpebral fissures. This syndrome disappeared within a few hours. No untoward complications were noted except that some patients complained of dizziness which was of short duration.

All patients were observed for a number of weeks after completion of their treatment. All were between 48 and 76 years of age, and most of them had been suffering from advanced stages of psychosis with cerebral arteriosclerosis or senile psychosis.

CASE REPORTS

CASE 1.—G. W. F., a 48-year-old white male, had always been a schizoid inadequate personality,

had remained single, and was never able to make a good adjustment. He suffered a cerebral vascular accident at age 48 and spent the next 3 months in hospital with a left-sided paresis. There, he experienced a psychotic episode with auditory hallucinations and delusions and was then transferred to a psychiatric hospital. On admission, patient was not oriented as to date. He appeared dull and anxious, showed some memory defect. He imagined that some people had threatened to kill him.

Patient was given 11 bilateral and 1 right-sided ganglion block within a period of 3 weeks. During treatment, he showed improvement. He became aware that he had experienced hallucinations and delusions, was oriented, more friendly and cooperative, and showed new interest in his environment. He felt that movement of his left leg had improved.

After treatment, psychological tests indicated an increase in emotional control and capacity for associative learning. He showed an increased though fluctuating capacity to initiate activity and was able to assume a more detached attitude toward ego-involved statements. His gross organic difficulties were still evident in all test data.

Two months after admission, patient had sufficiently improved to be transferred to the medical division. One year after his discharge from the hospital his family informed us that patient had maintained his improvement.

CASE 2.—J. D. C., 66 years old, had been working as a tailor. He had always been high strung, moody, and irritable. In August 1950, he fell and broke his hip. He insisted on returning to work in January 1951; found work difficult because of his hip. In February he became depressed and complained that he was finished. He accused his wife of trying to poison him, running around with other men, and having actually married another man. He claimed that people were persecuting him.

Mental examination showed a moderately depressed, paranoid patient who expressed many somatic complaints. His memory was impaired particularly in the sphere of retention and recent recall; he had difficulty in concentrating; his abstract thinking was poor.

Patient received 8 bilateral ganglion blocks within 2 weeks. He showed some clinical improvement, appeared less depressed, was in better contact and willing to discuss his problems; his attitude toward his delusions was one of doubt; his appetite improved.

His condition was considered moderately improved; however, his wife felt that she could not take care of him and patient was transferred to a state hospital.

CASE 3.—H. M., 68 years old, was married and had one daughter. He had worked steadily as a watchmaker. About 5 or 6 years prior to hospital admission, patient had become confused, had memory lapses, and became stubborn and somewhat difficult. In the past year his condition became worse. On several occasions, he had wandered out of the house late at night; suffered from insomnia, refused to bathe, and insisted on going "home."

Mental examination showed a patient disoriented as to time and place; his memory was markedly impaired and he confabulated; concentration and judgment were very poor. He was unable to do any of the verbal abstractions.

Patient received 11 bilateral and 1 right-sided ganglion block within a period of 3 weeks.

Psychological tests were repeated after treatment; on the Verbal Scale the patient received an I.Q. of 76 which was slightly higher than his previous score. This was due to a small increase in digit retention. Otherwise the record was the same. Clinically his mental condition was somewhat improved. Patient became quiet and cooperative and showed less tendency to confabulation.

He was discharged into the custody of his daughter, but was returned to the hospital after 18 days. The daughter related that after discharge from the hospital patient had had two episodes of fever and had again become confused. He was certified and transferred to a state hospital.

CASE 4.—J. R., 69 years old, was married and had 5 children. He had been working steadily in a furniture polishing factory. Patient was described as a good provider and a devoted father. About 10 months prior to admission, he began to suffer from sciatica; he was treated at home and managed to get about with the aid of a cane. Although bothered by his physical condition, patient was apparently in good mental health until a month prior to admission when he began to show evidence of being forgetful and confused. He began to imagine things; there was not enough heat in the house; the gas jets were on; there was poison in his coffee. Soon he became absorbed in his delusions to the extent that he would go down the cellar and turn on the water valves of the boiler. Later on, he began to complain that the pipes were going to explode.

On the Wechsler Memory Scale, the patient retained his personal and current information. Immediate recall and digit retention were poor, as were his results on memory design. Verbal abstraction, comprehension, and concentration were poor; his arithmetic relatively good.

Patient received 15 bilateral stellate ganglion blocks within a period of 4 weeks. During treatment he showed some improvement. He became quiet and cooperative and did not express delusional ideas. However, he did not show insight and remained preoccupied and moderately depressed. He showed no spontaneity and was hesitant with his answers; often his response was "I don't know."

He was discharged in custody of his daughter as moderately improved.

CASE 5.—S. I., 72 years old, was a widower and lived with his daughter. Patient had been well adjusted until about 8 months prior to admission. At that time, he had a cerebral vascular accident resulting in a paresis of his left arm. He recovered within one week, but had another cerebral vascular accident 4 weeks later accompanied by a left-sided paresis. Patient became confused at times and expressed suicidal thoughts; he claimed that he had

become paralyzed because of some pills he had received from his doctor prior to the stroke.

Mental examination showed a dull, depressed patient with memory defects. On the Wechsler Memory Scale, he showed some confusion as to current information. On the Goldstein-Scherer Color Form Sorting test, the patient showed no capacity at all for concept formation.

Patient received 6 bilateral and one right-sided stellate ganglion block within a period of 3 weeks.

He showed some clinical improvement especially shortly after infiltration. He stated that he felt better and claimed that he had a wider range of movement with his left shoulder; he spontaneously showed the examiner how he could move his left shoulder; made jokes. He became quiet and cooperative and showed less pathological emotionality.

Psychological tests were repeated after treatment. On the Verbal Scale of Bellevue-Wechsler, patient received an I.Q. of 84, which was slightly higher than his previous score.

The tests disclosed movement in 2 areas (1) an increase in score but not in level of difficulty of verbal abstractions, (2) evidence of an ability to form a concept in the Goldstein-Scherer test; with demonstration, patient was able to shift to a new concept.

Patient was discharged to his daughter, moderately improved, but was returned to the hospital after 5 days. He had developed a temperature at home and had become confused; was still febrile when admitted to the hospital. Patient was certified and transferred to a state hospital.

CASE 6.—J. Z., 68 years old, married with 3 children, had worked steadily as a tailor; he was devoted to his family, was an easy going man, rather timid, not outwardly affectionate, not sociable. For 10 years prior to hospital admission, patient had gradually been developing Parkinson's syndrome on a cerebral arteriosclerotic basis. Five years before admission, he had an accident and sustained a skull fracture. After that he showed mild personality changes. He worked until 9 months prior to admission. At that time he began to stare at strangers on the street, occasionally stopped people without talking to them. One day he urinated in a subway station; occasionally he soiled himself.

On the Wechsler memory test, he showed confusion as to personal and current information. He could not do any verbal abstractions and manifested very limited practical judgment. Concentration and memory were very poor.

Patient received 16 bilateral and 2 right-sided stellate ganglion blocks.

Clinically, he showed some improvement; he became more responsive; no longer soiled himself; he claimed that he walked with greater ease. Psychological tests were repeated after treatment but did not show any change.

He was discharged in custody of his son as moderately improved, but was returned to the hospital after 10 days. His son stated that his improvement had lasted only for one week. Patient was certified and transferred to a state hospital.

CASE 7.—S. M., 75 years old, a widower with 2 children, had worked steadily as a plumber. He was devoted to his family but not affectionate or sociable. He had been hard of hearing for well over 20 years. Twelve years ago he had a cerebral vascular accident resulting in left-sided paresis. Before this he had been used to a very active life. Two months prior to admission, he became drowsy and confused; this episode lasted several days. He had a similar episode a week later but recovered completely. Afterwards, he experienced episodes of confusion and suicidal thoughts.

Mental examination showed that patient was not oriented as to time; was confused as to personal and current information, and concentration and memory were very poor. He manifested no capacity for mental control.

Patient received 14 bilateral stellate ganglion blocks within a period of 4 weeks.

He showed some clinical improvement; he was in better contact and showed less pathological emotionality; was able to discuss his problems; however, his condition was fluctuating. Psychological tests were repeated after treatment but did not show essential change.

He was discharged as moderately improved into custody of his son for transfer to a home for the aged. He was returned to the hospital after 6 weeks. According to the report of the doctor, his improvement had lasted only 3 weeks. Patient was certified and transferred to a state hospital.

CASE 8.—N. G., 76 years old, was a widower with 4 children. His wife died 7 months prior to admission. He became depressed 2 months prior to admission; brooded over his inability to read and write English, and attempted suicide by hanging.

Mental examination showed a patient who was depressed and agitated. Results were extremely poor in tests of memory and retention; his abstract thinking and comprehension were impaired. On the Goldstein-Scherer Color Form Sorting test, he did not form any concept nor attempt to shift when shown one.

Patient received two bilateral stellate ganglion blocks and showed marked improvement; was no longer depressed; said that he was foolish to have attempted suicide and to have brooded about his inability to read and write English. His family insisted on taking him home and patient was discharged in custody of his son.

After 3 months, he was returned to the hospital having again become depressed. Patient received 10 bilateral stellate ganglion blocks within a period of 3 weeks. During treatment, patient's mood improved. He became quiet and cooperative, did not spontaneously express any worries and when questioned, stated that he did not care anymore about his inability to read and write English.

He was discharged to his son as improved, but was once more returned to hospital after 2 weeks. His son stated that patient had again become depressed one week after his discharge. He became agitated and preoccupied, worried that he and his family would be evicted from their home because he had given his incorrect age when admitted to

the hospital. Patient was certified and transferred to a state hospital.

COMMENT

We presented case report of 8 patients who received stellate ganglion block. This treatment was administered with the intention of dilating cerebral blood vessels and improving oxygen supply to the brain of patients suffering from organic psychoses of old age.

It is known that sympathetic and parasympathetic fibers supply the muscles of blood vessels of the brain(2, 4, 5). Forbes and Wolf(3) observed that stimulation of sympathetic nerves in cats caused a constriction of about 10% of the diameter of cerebral blood vessels. Risteen and Volpitto(11) noticed by direct observation through burr openings, an immediate increase in the size of vessels of the brain, following ganglion block. Naffziger and Adams(10) noticed a consistent rise in cerebrospinal fluid pressure for a period of 20 to 40 seconds following stellate ganglion block, suggesting a transient increase in the amount of blood entering the cranial cavity.

A number of authors have expressed doubt that the comparatively weak sympathetic control over cerebral blood vessels could have any significant effect on cerebral blood flow. However, the clinical picture of neurological phenomena such as fleeting paresis, aphasia, etc., as well as reports of clinical improvement of patients with cerebral embolism and thrombosis as a result of stellate ganglion block (Risteen and Volpitto, Karnosh and Gardner, Gilbert and Takats, Naffziger and Adams, Aymes and Perry), would support the assumption that sympathetic vasoconstriction of cerebral blood vessels may play an important role in certain organic conditions.

Only one of our patients has maintained his improvement up to date (1 year after completion of treatment). The other patients showed only temporary or moderate improvement. Psychological tests were repeated after treatment for 5 patients and some improvement was shown in 3 of them.

Although it had been planned to administer this treatment only to patients in the early phase of organic psychosis of senility the ma-

terial available consisted mostly of patients in advanced stages.

Our group was far too small to allow a just evaluation of this method; furthermore these patients were kept longer in the hospital and received more attention than patients with similar conditions but not being treated with stellate ganglion block. Our patients were told that they were given treatment for the purpose of helping them; however, most of them had little insight and did not want to be treated; some were afraid of the infiltration.

It was not possible to evaluate these psychological factors, as practical considerations did not allow us to keep a control group of patients without giving them procaine infiltrations. At no time was any form of psychotherapy applied.

We believe that certain tentative conclusions can be drawn from our study. For this purpose we will divide our patients into 2 groups, one consisting of 6 patients who showed signs of advanced organic psychosis and the other of 2 patients (cases 1 and 8) who showed signs of the early phases.

The results in the first group were as follows: One (case 2) was transferred to a state hospital after completion of treatment; 3 (cases 3, 5, 6) were discharged to their families but they were returned to hospital after 5 to 18 days and had to be transferred to a state hospital; one (case 4) remained home but his condition on discharge was considered only moderately improved; although he did not express delusional ideas, he did not gain insight and remained preoccupied and moderately depressed; one patient (case 8) was discharged to a home for the aged but was returned to hospital after 6 weeks with a statement by his doctor that his improvement had lasted for only 3 weeks.

Our second group consisted of only 2 patients. One (case 1) recovered from his psychotic episode and 1 year after discharge has maintained his improvement. The other (case 8) showed a dramatic improvement after 2 infiltrations; this marked improvement lasted for about 3 months. This patient had been severely depressed and had made a suicidal attempt. It will be remembered that Karnosh and Gardner(8) were impressed by

the improvement in mood of 60% of their patients after stellate ganglion infiltration.

Those results lead us to believe that stellate ganglion infiltration is not of great value in patients who are in an advanced stage of a senile organic psychosis. It appears that these patients have such severe brain pathology that brief improvement of the circulation of the brain results only in temporary or moderate clinical improvement.

On the other hand, the patients in our second group showed a much better response to stellate ganglion infiltration. We assume that patients in the early phase of senile organic psychosis can be helped to integrate on a more realistic level of adjustment by temporary and repeated improvement of brain circulation. Furthermore, a period of several months of improvement will make it possible to give such patients psychotherapy in an attempt to maintain their improvement.

SUMMARY

The results of stellate ganglion infiltration in 8 patients, suffering from psychosis with cerebral arteriosclerosis or senile psychosis, are discussed.

The rationale of this treatment is presented and a number of papers dealing with the effect of this method are briefly reviewed.

Six patients who were in an advanced state of organic mental deterioration showed only temporary or moderate improvement. Two patients in the early phase of senile organic psychosis showed marked improvement. One remains improved to date (1 year after com-

pletion of treatment), while the improvement of the other patient lasted for 3 months.

The tentative conclusions arrived at were that while stellate ganglion infiltration is not of great benefit to patients in the advanced stages of senile psychoses it seems to have good results in patients in the early phase of psychoses of late life. Although we had only 2 cases in this group, the results seem encouraging enough to explore the value of stellate ganglion infiltration in such patients.

The technique used is simple and complications did not occur.

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COMPARATIVE DIAGNOSTIC CONSIDERATIONS AND PROGNOSTIC EVALUATIONS OF ELECTROSHOCK AND INSULIN COMA TREATMENTS

A COMPARISON OF NORWEGIAN AND AMERICAN PSYCHIATRIC AND PSYCHOLOGICAL CONCEPTS

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Aim of the Research.—During a stay on a Fulbright fellowship at the Manteno State Hospital, Manteno, Illinois, G. Langfeldt proposed a joint study with a psychiatrist and 2 psychologists of the Manteno State Hospital staff aimed at a comparison between American and Scandinavian criteria, and also a comparison of the criteria regularly used to assess the effects of shock therapy.

The Material.—Originally it was hoped that in 6 months an equal number of cases of each sex might be selected to give a statistically significant result. Due to the fact that among the patients received at Manteno, relatively few cases may be classified as "acute" and relatively few have not received previous treatment, only 25 patients were found in a 6-month period who were considered suitable for this project. Since very few male patients were found, the study was restricted to females, and the entire project was changed from a statistical study to a careful case study.

Selection of patients and treatment was begun in October 1952. All of the patients were received at Manteno from the Cook County Psychopathic Hospital with an admitting diagnosis of schizophrenia. Only those patients were selected for the study in whom the 2 psychiatrists concurred that either electroshock or insulin therapy should be tried; consequently, cases with psychoses of short duration predominated. Only 5 cases of longer duration are included. All patients were free from physical defects, and all had a negative history for somatic diseases which might be presumed to influence the course of the mental disorder.

One case only appeared to be complicated

by an organic brain syndrome. The age of the patients and the duration of the disease before treatment may be seen in Table 1. Eight of the patients were colored, and 17 were white.

METHOD

The diagnosis as well as the prognosis of the individual case was made separately by each member of the team, and no conference took place on these questions until the completion of treatment. The psychiatrists used the usual methods of diagnosis, namely, review of the history, patient interviews, and psychiatric-neurological examinations. The psychologists used psychological interviews and in addition, psychological tests.

The psychiatrists based their prognoses principally on their individual clinical experience. As will be seen from the diagnoses listed in Table 2, some of the cases diagnosed by the American psychiatrist and by the psychologists as "schizophrenia" were diagnosed by the Norwegian psychiatrist as "constitutional reaction types." The cause for this disagreement seems to be that the latter diagnosis is little used in the United States and is included in a comprehensive group entitled "schizophrenia." In Scandinavia and Europe generally, the concept of schizophrenia seems to be quite another one, with more rigid requirements.

The conception of schizophrenia as it

TABLE 1
AGES OF PATIENTS AND DURATION OF THE MENTAL DISEASE BEFORE TREATMENT

| Ages | Total | Duration of disease before treatment | |
|------------|-------|--------------------------------------|--------------|
| | | Years | No. of cases |
| 20-30..... | 11 | <½..... | 14 |
| 30-40..... | 8 | ½-1..... | 6 |
| 40-50..... | 3 | 1-2..... | 2 |
| 50-60..... | 3 | >2..... | 3 |

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varied between the different psychiatrists and psychologists on the team is indicated by the following:

I. The American psychiatrist in her diagnosis of schizophrenia adhered primarily to those symptoms stressed by E. Bleuler, namely: (1) withdrawal from reality (autism); (2) inappropriate affect; (3) delusions and hallucinations; (4) illogical thinking (disturbance of associations).

II. The American psychologists followed the diagnostic clues enumerated above, but in addition considered severe regressive behavior to be significant. A further condition to the diagnosis "schizophrenia" is the absence of toxic agents or organic brain damage. The psychologists also take advantage of psychological testing in evaluation of the diagnosis, and find that the following features contribute to a diagnosis of schizophrenia: (1) indications of illogical and concrete thinking; (2) disrupted control of emotions; (3) inability to see what is commonly perceived; (4) suggestions of specific hallucinatory experiences or delusional ideation; (5) confusion about what or who the patient is; (6) evasiveness due to suspiciousness or extreme vulnerability to threat; (7) evidence of pathological or absent interpersonal relationships; (8) evidence of marked self-preoccupation; (9) fluctuation, including sudden withdrawal of interest and energy, and sudden investment of emotion outside themselves.

III. The Norwegian psychiatrist maintains a relatively restricted concept of schizophrenia, requiring positive presence of personality traits and symptoms which have been proved by individual follow-up (except for some acute catatonic cases) to indicate progression to deterioration after a longer or shorter period. All cases which may simulate schizophrenia, but in which such findings are not present are grouped as schizophreniform psychoses, or as constitutional psychoses if the constitutional basis for the reaction is evident. The clues to the diagnosis of schizophrenia, therefore, are the positive evidence of personality change, the symptomatology in the acute states characterized by what Langfeldt calls "depersonalization and derealization symptoms." According to Langfeldt, these are probably caused by the reaction of the pa-

tients to the primary (biological?) cause of the disease, and manifest themselves in the feeling of being bodily and mentally changed and influenced. At the same time the patient has the experience that the surrounding world has been changed.⁸

As to the prediction of results, the team agreed to adopt the following classification (see Table 2):

- | | |
|-----|--|
| +++ | Complete recovery without any residue of symptoms. |
| ++ | Much improvement with only slight mental impairment. |
| + | Somewhat improved, but without signs of real cure. |
| ÷ | No effect. |
| ÷÷ | Worse. |

The predictions were made by the team members separately.

The American psychiatrist based her prognostic evaluations chiefly upon the following: (1) Acuteness of onset and short duration of illness generally indicate a favorable prognosis. (2) The personality type is of importance. Introversion, difficulties in heterosexual adjustment, and difficulty in forming and maintaining positive personal relationships as a rule indicate a poor prognosis. (3) The type of hallucinations and delusions as well as the weirdness of ideas in the actual psychotic picture also give some clue to the prognosis.

The American psychologists evaluated the prognosis on evidence, obtained from tests or directly from the patient interview, of any of the following: (1) suddenness of onset, (2) satisfactoriness and number of interpersonal relationships formed by the patient prior to his illness, (3) evidence of an active struggle to solve problems and conflicts, (4) presence of some elements of self-esteem; (5) relative lack of rigidity in personality.

These findings are considered favorable prognostic signs.

The Norwegian psychiatrist in his evalua-

⁸ Langfeldt (1, 2), in 1937, described these symptoms in 2 monographs which should be consulted for a full description. Nolan D. C. Lewis (3) has described 10 symptoms which he assumes to be the principal clues to the diagnosis of schizophrenia. These are obtained by almost the same method as used by Langfeldt, and it is of interest that most of the symptoms described by Lewis can be included in the depersonalization and derealization symptoms described by Langfeldt.

TABLE 2
DIAGNOSES, PROGNOSTIC EVALUATION, AND EFFECTS OF TREATMENTS AGREED UPON

| Patients | Diagnoses | Prognostic evaluation | | | | | |
|-------------------|--|-----------------------|----------------|------------------------|----------------|------------------------|----------------|
| | | American psychiatrist | | American psychologists | | Norwegian psychiatrist | |
| | | Immediate effect | Lasting effect | Immediate effect | Lasting effect | Immediate effect | Lasting effect |
| (1) G. L. S. | American psychiatrist Schizophrenic reaction | ++ | ++ | ++ | ++ | + | + |
| (2) S. M. | Schizophrenic reaction | ++ | ++ | ++ | ++ | + | + |
| (3) A. D. N. | Constitutional psychosis | + | + | + | + | + | + |
| (4) S. B. | Paranoid state | + | + | + | + | + | + |
| (5) H. G. | Schizophrenic reaction | .. | .. | .. | .. | ++ | ++ |
| (6) E. C. | Schizophrenic reaction | + | + | + | + | ++ | ++ |
| (7) L. A. | Schizophrenic reaction | + | + | + | + | + | + |
| (8) M. M. G. | Schizophrenic reaction | + | + | ++ | ++ | ++ | ++ |
| (9) A. T. | Schizophrenic reaction | ++ | ++ | + | + | + | + |
| (10) B. G. | Schizophrenic reaction | + | + | + | + | + | + |
| (11) I. K. | Schizophrenic reaction | + | + | + | + | + | + |
| (12) H. P. | Schizophrenic reaction | +++ | +++ | ++ | ++ | + | + |
| (13) E. T. | Schizophrenic reaction | + | + | + | + | + | + |

Effect of treatments agreed upon

Immediate Lasting effect effect

TABLE 2—Continued

| Patients | | Diagnoses | Prognostic evaluation | | | | | | Effect of treatments agreed upon | |
|-----------------|--|------------------------|------------------------|------------------------|--------------------------|---|---|---|----------------------------------|--|
| | | | American psychiatrist | | | Norwegian psychiatrist | | | | |
| | | | Immediate effect | Lasting effect | Immedi- ate effect | Imme- di ate Last- ing effect | Imme- di ate Last- ing effect | Imme- di ate Last- ing effect | | |
| (14) M. L. | | American psychiatrist | Schizophrenic reaction | Schizophrenic reaction | Schizophrenia | Constitutional psychosis | Schizophrenia | Constitutional psychosis | ++ | |
| (15) V. D. | | Schizophrenic reaction | Schizophrenic reaction | Schizophrenic reaction | Schizophrenia | Schizophrenia | Schizophrenia | Schizophrenia | ++ | |
| (16) S. M. | | Schizophrenic reaction | Schizophrenic reaction | Schizophrenic reaction | Schizophrenia | Schizophrenia | Schizophrenia | Schizophrenia | ++ | |
| (17) J. J. | | Schizophrenic reaction | Schizophrenic reaction | Schizophrenic reaction | Schizophrenia | Schizophrenia | Schizophrenia | Schizophrenia | ++ | |
| (18) P. A. | | Schizophrenic reaction | Schizophrenic reaction | Schizophrenic reaction | Schizophrenia | Schizophrenia | Schizophrenia | Schizophrenia | ++ | |
| (19) H. K. | | Psychopathy | Schizophrenic reaction | Schizophrenic reaction | Schizophrenia | Schizophrenia | Schizophrenia | Schizophrenia | ++ | |
| (20) R. C. | | Schizophrenic reaction | Schizophrenic reaction | Schizophrenic reaction | Schizophrenia | Schizophrenia | Schizophrenia | Schizophrenia | ++ | |
| (21) R. S. | | Schizophrenic reaction | Schizophrenic reaction | Schizophrenic reaction | Schizophrenia | Schizophrenia | Schizophrenia | Schizophrenia | ++ | |
| (22) P. M. | | Schizophrenic reaction | Schizophrenic reaction | Schizophrenic reaction | Schizophrenia | Schizophrenia | Schizophrenia | Schizophrenia | ++ | |
| (23) D. R. | | Schizophrenic reaction | Schizophrenic reaction | Schizophrenic reaction | Constitutional psychosis | Constitutional psychosis | Constitutional psychosis | Constitutional psychosis | ++ | |
| (24) S. S. | | Schizophrenic reaction | Schizophrenic reaction | Schizophrenic reaction | Schizophrenia | Schizophrenia | Schizophrenia | Schizophrenia | ++ | |
| (25) A. C. | | Schizophrenic reaction | Schizophrenic reaction | Schizophrenic reaction | Schizophrenia | Schizophrenia | Schizophrenia | Schizophrenia | ++ | |

+++ = recovered.
++ = much improved.
+ = Improved.
- = no effect or worse.

tion of the prognosis relied upon his experiences in individual follow-up investigations of schizophrenic and schizophrenia-like patients from 10-15 years after their stay in the University Psychiatric Clinic of Oslo, Norway. There he observed that insofar as the personality type is concerned, the so-called schizoid individuals (Kretschmer) corresponding closely to Adolf Meyer's "shut-in" personalities, represented an unfavorable group, especially when this personality type was associated with the leptosome body build. If such types suffered from a psychosis characterized by depersonalization and derealization symptoms not of brain organic or toxic origin, the patient would ordinarily deteriorate during the lapse of 2-3 years. Depersonalization and derealization symptoms are most frequently met with in the paranoid type of schizophrenia, but may also be present in mixed catatonic-paranoid cases. In hebephrenic cases an insidious development and emotional schizophrenic changes indicated a poor prognosis. On the other hand the superimposition of confusional, psychogenic, and manic-depressive features on the acute psychotic picture regularly indicated a good prognosis if depersonalization and derealization symptoms were not present. According to the concept of the Norwegian psychiatrist it is, however, of the greatest importance to base the diagnosis as well as the prognosis on the positive demonstration of the typical schizophrenic symptoms (depersonalization—derealization symptoms, typical emotional blunting, and bizarre psychomotor behavior). If the patient is not confused, and if organic brain disorder and intoxications or infections can be excluded, the symptoms mentioned are regularly indicative of a typical schizophrenic process and as such indicate a poor prognosis.

In the follow-up investigations the patient was presented to the team in joint conference and the effect or lack of effect of the treatments was agreed upon. In the evaluation of the effect, attention was primarily directed to the question of whether any real improvement of the basic mental disorder had occurred. If this was not the case a single "+" was the maximum credited to better behavior such as increased sociability, transitory disappearance of hallucinations,

etc. The length of observation after treatment varied from one to 12 months. Only 8 of the 25 patients have had a conditional release without return. The rest either had no release or else returned after a relatively short stay outside the hospital.

RESULTS

From Table 2, it can be seen that in 16 cases (1, 2, 5, 6, 7, 10, 11, 13, 14, 15, 16, 17, 20, 21, 22, 24) all team members were agreed upon a diagnosis of schizophrenia (or schizophrenic reaction, in American terminology). The American psychiatrist and psychologists were in agreement upon diagnosing an additional 6 cases (8, 12, 16, 18, 23, 25) as schizophrenic reactions. In only 2 cases (9, 19) did the American and the Norwegian psychiatrists differ from the diagnoses reached by the psychologists (the psychologists called Case 9 "reactive psychosis in climacterium"; the psychiatrists called it "schizophrenia.") The psychologists called Case 19 "a schizophrenic process"—chiefly on the basis of the results in figure drawing, Rorschach, and T.A.T. tests. The 2 psychiatrists looked upon it as "an expression of constitutional inferiority with reactions of a non-schizophrenic nature." Case 19 was admittedly a difficult case diagnostically, and it is possible that precisely in cases of this type psychological tests can be an aid to early diagnosis.

The result of chief interest is the fact that while in 8 cases (5, 6, 8, 12, 16, 18, 23, 25) all American team members arrived at a diagnosis of schizophrenic reaction, the Norwegian psychiatrist looked upon these cases as schizophrenia-like (schizophreniform) reactions, in individuals suffering from constitutional inferiority (constitutional psychosis) or else as psychogenic reactions with a schizophrenia-like picture. According to the concepts of the American team members, these latter cases would properly fit the American diagnostic category of schizophrenic reactions. All except one of them were acute cases, 5 having a duration of less than 6 months, the sixth having a duration of less than one year, and the seventh case being chronic.

These cases were all (with one exception) characterized by a relatively acute onset, and by absence of prepsychotic personality

changes suggesting schizophrenia. Three of these cases were regarded by the Norwegian psychiatrist as psychogenically conditioned reactive psychoses, and one as an acute hysterical psychosis, and the remaining 4 as constitutional psychoses.

It is of interest to consider the prognostic evaluations made by the team members in relation to their diagnostic evaluations. In 18 of the 25 cases, all members predicted a similar result (a variation of only a single "+", more or less). The same agreement applied to 15 cases as far as a prediction of lasting effects is concerned. In 7 cases there was considerable disagreement as to the probable immediate effect of treatment, and in 10 cases there was disagreement upon the probable more lasting effects.

Further analysis of Table 2 reveals that where good immediate effects with treatment were predicted, agreement was reached in only 4 cases. Where prediction of a poor effect was made agreement was reached in 11 cases. However, in only one case was there agreement upon prediction of a lasting good effect (case 25), while there was agreement in 13 of the 25 cases upon the prediction of a lasting poor effect.

The chief difference in evaluation seems to occur in those cases in which the American team members expected only transitory effect. Most of these cases were regarded by the American members of the team as cases of "real schizophrenia" in which treatment might give immediate good results, but in which lasting good results could not be anticipated. On the contrary the Norwegian psychiatrist, in those 7 cases where he predicted a lasting good effect, based his predictions upon a diagnosis of "constitutional psychosis." It is of interest that the 2 psychologists were more reserved in predicting a lasting good effect than the psychiatrists. The psychologists predicted a good lasting effect in only 2 cases (1, 25) whereas the American psychiatrist made this prediction in 6 cases, and the Norwegian in 7.

EFFECT OF TREATMENT

The immediate effect of the treatments was generally relatively poor inasmuch as a good response (+++ or++) occurred in only 5 cases (5, 8, 18, 22, 24). All of these responded to electroshock. In 8 of the

20 cases which did not respond to electroshock, insulin coma therapy was tried without any better effect. The good effect which occurred in the 5 cases mentioned above had been predicted in 3 cases by the American psychologists even though they regarded these cases as schizophrenic reactions. The Norwegian psychiatrist had also predicted a good effect in 3 of these cases, but his diagnosis in each of the 3 cases was constitutional psychosis of a nonschizophrenic nature. The American psychiatrist had indicated a good immediate effect in 3 of the 5 cases.

An interesting fact is that the lack of effect of treatment was forecast by all researchers in 11 of the 20 cases which did not respond to treatment. In addition, in 7 of these cases 2 of the team had predicted a poor prognosis. It seems therefore that the indication as to the lack of effect holds true in a majority of the cases.

As to the long-term effect of treatment the following can be stated: Of the 25 cases, 11 have—after one year—not been released at all; 6 have been released for one to 3 months, but have returned; and only 8 had, up to November 1953, a conditional release. According to the individual follow-up investigations, a good lasting effect with a real change of the basic psychotic symptoms has taken place in only a single case (No. 8) which the American members of the team looked upon as a schizophrenic reaction while the Norwegian psychiatrist looked upon it as constitutional psychosis. In the 16 cases which are now in the hospital, no real improvement has taken place except for one case (No. 24). Neither has any real change in the underlying personality taken place in the 8 cases which for the present are on conditional release.

CONCLUSIONS

In spite of the different opinions as to the diagnosis and prognoses in the 25 cases included in this team study, the following positive conclusions are agreed upon by all members of the team:

In those cases, which in the United States are usually diagnosed as schizophrenic reactions, it is possible by the help of a careful history, psychiatric examination, psychological interview, and psychological tests, to pre-

dict with a high percentage of certainty those cases which will not profit from electroshock or insulin therapy. Although 15 of the 25 cases had a duration of less than 6 months, and 6 of the cases less than one year, only 5 cases showed a good immediate effect of the treatments. Four of these were looked upon by the Norwegian psychiatrist not as schizophrenic, but as constitutional psychoses. Eight of the cases were treated with both electroshock and insulin coma therapy. Since 12 of the cases were looked upon by one or more of the researchers as giving promise of temporary improvement from treatment, it seems it is much more difficult to evaluate a good effect than a poor one. This seems to be related to the fact that the indication of a poor effect regularly has been based on the presence of positive signs of a schizophrenic personality and actual schizophrenic symptoms.

As to the prediction of a lasting effect of treatment in cases which were assumed to have received temporary benefit, this prediction seems to have been dependent upon the decision as to whether the case in question was considered to be a real schizophrenic one or a reactive psychosis. Since great difference of opinion existed on the latter point, especially between the American as compared with the Norwegian researchers, great disagreement occurred in this type of prediction. The Norwegian psychiatrist had indicated a good lasting effect in 7 cases, which he considered as nonschizophrenic, constitutional psychoses, while the American psychologists indicated such effect in only 2 cases, and the American psychiatrist indicated a good lasting effect in 6 cases.

As to the final evaluation of results of therapy after the last follow-up investigation, the following may be stated: Although this research has produced evidence that some acute psychotic cases regularly diagnosed as schizophrenic reactions may profit temporarily from electroshock or insulin therapy, the researchers have been very reserved in their assumption of a more lasting benefit. As such lasting effect depends upon the underlying personality structure, as well as on the existence of possible precipitating factors, and on the symptomatology in the initial stages, it is of the greatest importance

in the evaluation of the prognosis and in the indication of therapy to give necessary respect to the fact brought out in this study, *viz.*, that in the group regularly diagnosed in U. S. A. as schizophrenic reactions, it is possible by coordination of psychiatric and psychological experience to distinguish between 2 groups of psychoses, characterized also by difference in immediate response to the therapies mentioned. Next it should be noted that it has been shown to be relatively easy to predict most of those cases which will not benefit from the treatments. Much clinical experiences and extensive cooperation between psychiatrists and psychologists seems necessary however to establish solid clues to the evaluation of more lasting effects in cases which prove to benefit temporarily from the treatments. For this reason it is necessary in all statistics dealing with shock therapies to distinguish between 2 groups, *viz.*, the one which consists of cases of psychoses which according to clinical and psychological experience are believed capable of no or only temporary effect; and the other group which is believed capable of more lasting effects. It may be merely a matter of estimation whether one wishes to include both of these groups in the comprehensive schizophrenia-group, or whether as proposed by Langfeldt (1937) and Bellak (1948) one should give them different names. But for the sake of clinical evaluation, economy, and research, such differentiation is by the authors of this paper assumed to be very important.

The small number of cases included in this teamwork can only give indication of the problems involved. It would certainly be of great value if research on a larger material could prove statistically the difference between the 2 groups of schizophrenia, and also state the lack of real effect of the different treatments in the typical schizophrenic cases.

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OCCUPATIONAL THERAPY WITH "REFRACTORY" PATIENTS

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THE PROBLEM

Satisfaction derived from the contemplation of modern therapeutic techniques needs to be tempered by the sober realization that they remain relatively unavailable to the majority of mental hospital patients. It is no exaggeration to say that it is not so much our lack of knowledge as to what we should do for him that hinders the recovery of the mental hospital patient, as our inability to provide for him, in full measure, treatment which we know to be effective. This is, of course, another way of saying that mental hospitals tend to be inadequately staffed. That this should be so is dependent on a variety of factors, among which, in some instances, is a certain parsimony in the expenditure of public funds. More important, however, is the difficulty of attracting persons with special training, be they social workers or occupational therapists, to the mental hospital. Such special training is usually given in the cloistered calm of university teaching centers, and the orderly and academic attitudes thereby inculcated often make their possessors particularly vulnerable to the relatively chaotic atmosphere of a large and busy institution. The problems that beset an occupational therapist coming to a state hospital from the training school have been discussed by Taggart(1). A result is that mental hospitals find difficulty in attracting and retaining occupational therapists, who in this setting are often grossly overworked. This being the case, the gap must be filled by the nurses and by that general practitioner of psychiatry, the staff psychiatrist, who must consider possible substitutes for the activities that would normally be directed by a trained therapist.

The substitute most often used is the employment of patients on the hospital farm, in the laundry, and in other utility activities. This so-called "industrial therapy" (which is primarily concerned with the needs of the

institution and is only secondarily therapeutic) takes the place of occupational therapy for the majority of mental hospital patients. Not all patients, however, can be productive, and those who cannot work are apt to remain on the wards, idle and deteriorating. This group, the "submerged tenth" of the mental hospital population, presents a challenge to modern therapeutic methods. In a previous report, Martin(2) described one of the ways in which this challenge is being met at North Battleford. Martin used physical treatments (ECT) and changed the physical and psychological environment of the patients. The present paper describes an attempt to use occupational therapy with a similar "back" ward group, and it is hoped that at some future time it will be possible to report on the results of group therapy in the same setting.

THE PLAN

The writers began with certain provisional assumptions, as follows: (1) that occupational therapy as such does not need justification. It is a therapeutic tool that "works." (2) That there is no justification, apart from the administrative difficulties thereby avoided, for labelling some patients "unsuitable for occupational therapy." (3) That therapy should be geared to the patients, and not patients to the therapy. (4) That it would be necessary to look for occupations which, while fulfilling the usual aims of this type of therapy (reality testing, creativity, achievement, release of aggression, etc.) would yet be within the capability of severely disintegrated personalities. (5) That enthusiasm on the part of the nursing staff would make up for a lack of special training in the field of occupational therapy.

To what extent these assumptions were justified will be apparent from the case histories described. Before coming to these, an account is necessary of the way in which the assumptions were translated into action.

The wards chosen for the pilot project housed the most "deteriorated" female patients in the hospital. Of a total of 120, most

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were chronic schizophrenics, but there was a sprinkling of mental defectives, epileptics, and others. Generally, these patients were unoccupied, apart from some desultory domestic tasks on the ward. Their toilet habits were poor and they showed little interest in their own appearance or in those around them. From this larger group, a random selection of 14 patients was made with a view to ascertaining what, if any, effect might be expected from the introduction of more intensive, planned activities to these wards. The subgroup proved to contain 11 schizophrenics, 1 epileptic, and 2 mental defectives. It was arranged that these 14 women should go out with a nurse each day and that during the summer months, they should till, sow, and cultivate a plot of land. In the winter, they still went out together and had the task of keeping certain paths around the hospital clear of snow.

As an occupation with the greatest likelihood of arousing interest in these autistic patients, horticulture seemed the natural choice. Saskatchewan is an agricultural province and most of our patients are farm dwellers, whose lives are measured, in fat years and lean, by the epochs of the soil. Cultivating gardens in summer and growing houseplants in winter are evidently the most favored hobbies of Saskatchewan housewives, and we hoped that such culturally determined proclivities might still be latent in our patients. We were encouraged in these hopes when, during interviews in which patients were asked if there was some kind of work they would like to do, two of the women expressed a preference for gardening. (The others expressed no interest of any kind).

RESULTS

The plan was put into operation in the spring of 1952 at the beginning of the gardening season. After it had been in operation for a year the following results were apparent:

Effect on the Nurses.—Initial scepticism has been replaced by enthusiasm. The feeling is abroad among the nursing staff that something can be done for these patients after all.

Effect on the Patients as a Group.—Whereas at first each patient went her own

way, lost in her own fantasies, there has been a definite trend towards greater cohesion. Verbal and nonverbal forms of communication have increased. It is noteworthy that even on days when the weather is too bad for patients to go out, they still stick together as a group on the ward. Not only does the group hold together, but the group feeling has communicated itself to other patients on the ward, and requests to join the group are beginning to be heard.

Effect on the Patients Individually.—A change for the better, as may be seen from the following case histories, was seen to some extent in all the patients involved in the project.

Miss M. J.—A 42-year-old paranoid schizophrenic patient who has been in this hospital since 1941, having previously been in a mental hospital elsewhere. Her thinking was disconnected, she was delusional, suffered from auditory and visual hallucinations, and was quite negativistic. Despite ECT her habits deteriorated, and she became difficult to manage. She took no interest in other patients and no interest in her personal appearance. It was difficult to keep clothes on her.

Since joining the gardening group, she not only keeps her clothes on, but insists on clothes of her choice (including nylon stockings). She has become clean in her habits, and an interested participant in the social activities of the hospital. She still suffers from episodes of hyperactivity, but in these, she is not nearly so disturbed as formerly. Whereas previously ECT was relatively ineffective in controlling this patient's outbursts, her disturbances now respond rapidly to this form of treatment.

Mrs. S. S.—This 49-year-old Indian woman has been in hospital for 11 years. The diagnosis on admission was mental deficiency, but her manneristic and impulsive behavior, her shallow and inappropriate affect, and her complete lack of interest and initiative led to a change of diagnosis to hebephrenic schizophrenia. On the ward, she was irritable, quarrelsome, and hard to manage, in addition to being neglectful of her personal cleanliness.

Since gardening she has become more sociable, more interested in her personal appearance, and much less aggressive. ECT, previously used as symptomatic treatment of her impulsive outbursts, is no longer required. This patient's improvement has been such that her relatives are now pressing to take her home.

Miss E. L.—This 38-year-old woman has been in hospital for 12 years. The diagnosis is epilepsy with psychosis. Her seizures are satisfactorily controlled on anticonvulsive medication, but until recently her behavior was a great problem. She was hallucinated, confused, destructive, and violent. Toward the nurses she was resistive, and among the other patients she was a troublemaker. Her appearance was neglected, and she was not too

particular as to where she emptied her bowels or bladder.

Since she joined the gardening group, the change in this epileptic patient has been even more gratifying than in some of the schizophrenic patients. She works willingly, co-operates with the nurses, and now gets along reasonably happily with the other patients. From being a black sheep among them, she has become a good shepherd. Being an epileptic she overplays this role, but in doing so, causes few hard feelings and is a much more acceptable person.

Miss E. M.—This is a 23-year-old woman suffering from hebephrenic schizophrenia who has been in hospital since 1949. Her response to physical treatments was poor and she has remained continuously disturbed, being alternately agitated and violent, or withdrawn and inaccessible. Apparently in response to hallucinatory commands she would frequently take off all her clothes and refused to wear even shoes. Her habits were filthy, and she was generally hard to manage.

This pattern of behavior has undergone an appreciable modification since joining the group. Although her hallucinations and her schizophrenic dilapidation remain, it has become apparent that part of her personality untouched by the psychotic process is able to respond to social influences. Her toilet habits have improved, she is more co-operative to nursing care and shows at times an obvious eagerness to please. The outbursts of violence and hyperactivity are neither so frequent nor so severe, and she has begun to attend various social functions in the hospital.

Miss J. R.—This is a 33-year-old Mongolian idiot who has been in hospital for 5 years. Before gardening, she was helpless, and without interest in her surroundings. She would take no part in any social activities and sat around the ward all day doing nothing. She was unable to dress herself. Recently she has shown a higher level of performance than ever before. For the first time in her life she has become able to dress herself. She copies other members of the group and shows a definite interest in what is going on around her.

Mrs. N. F.—This 45-year-old catatonic patient, who has been in hospital for 18 years, showed a poor response to convulsive therapy, and as time went by gradually deteriorated. She was hallucinated, withdrawn, and usually mute. She was generally underactive, but sometimes became excited and violent. She hoarded rubbish, and was unclean in her personal habits. A prominent feature of her behavior was the habit of rushing up to any man who entered the ward and seizing him by the genitals.

This patient has shown an active interest in gardening, has become less restless and has shown considerable social improvement. She takes more care of her appearance, no longer hoards rubbish, and is able to attend mixed social gatherings without displaying her previously uninhibited sexual advances. It is a measure of her improvement that she has recently been able to attend the hospital dances.

Miss I. W.—This is a 33-year-old patient suffering from catatonic schizophrenia who has been in hospital for 12 years. Her talk was disconnected and disjointed, and expressive of many fantastic delusions. Despite a variety of physical therapies, she became increasingly filthy in her habits, more violent in her excited outbursts, apathetic, and withdrawn.

Participation in the activities of the gardening group had led not only to a social improvement, with increased cleanliness and care of her personal appearance, but to an apparent reversal of the schizophrenic disintegration. Her conversation, previously reduced to the "word-salad" level, is now much more connected and comprehensible.

Mrs. H. M.—A 56-year-old paranoid schizophrenic, since her admission 16 years ago with delusions of persecution, despite physical therapies, has gradually deteriorated. Always suspicious, she is at times violent. At other times she becomes extremely negativistic and tube feeding was required. She has shown no interest in her surroundings, and her usual occupation has been sitting on the ward picking the furniture to pieces and ripping her clothes.

This patient's initial response to gardening was disappointing. At first she displayed no interest and in fact seemed quite indifferent to the situation. However, with constant prompting and encouragement, she finally began to take an interest and from this time onward there was a change in her behavior. She has become more co-operative, and although she still occasionally tears up rags and papers, she no longer destroys her clothing or the furniture. Her improvement is such that it is now possible to transfer her to a more advanced ward.

Miss M. R.—This 39-year-old schizophrenic patient has been in hospital since 1939, having become psychotic in adolescence. She continued to deteriorate in spite of physical therapies and was filthy in her habits, resistive, and destructive. In addition to exhibiting the usual schizophrenic pattern of withdrawal, she took pains never to show her face, even when eating. On the ward, she neglected her personal appearance and was never interested in any activity.

Since joining the gardening group she has, for the first time in many years, become interested in something. This interest has been accompanied by an improvement in her personal appearance, and a general improvement in her habits. She no longer keeps her face covered, and is eager to go out with the group each morning.

Mrs. T. A.—This is a 37-year-old patient suffering from catatonic schizophrenia who has been in hospital for 14 years. Her behavior is characterized by recurrent outbursts of violence with destructiveness. As the years went by her habits deteriorated, any slight interest in her surroundings diminished, and she became completely isolated and withdrawn. Since joining the gardening group she has shown an increasing interest in her personal appearance, and has begun to take an interest in other people. Her toilet habits, previously filthy, are now normal. She attends all social activities

in the hospital. She still shows occasional outbursts of agitation, but these are not so severe as formerly, and they settle down without the use of ECT which was previously required.

Mrs. E. C.—A 42-year old patient suffering from catatonic schizophrenia, who has been in hospital for 14 years, in addition to displaying catatonic excitement and stupor has shown many paranoid symptoms, with bizarre ideation and inappropriate affect. From the nurses' viewpoint her refusal to wear clothes, her untidiness, and her impulsiveness were the most important features of her behavior. She showed neither the wish nor the ability to communicate with others, and her toilet habits were very poor.

This patient showed a very rapid response to being put on the gardening group. She began to communicate quite freely, and became more sociable and indeed quite a pleasant person. From being extremely careless, she became normally mindful of her personal appearance, and has stated on many occasions that she enjoys working in the garden. She has shown a complete cessation of her impulsive outbursts, and her improvement is such that her relatives wish to take her home.

Miss N. D.—This patient, aged 36, was admitted to hospital 18 years ago as an imbecile. Her behavior was restless and violent and she was continually disrobing. She seemed unable to perform the simplest tasks, had poor toilet habits, took no part in social functions, and was occasionally quite impulsive and resistive.

Since joining the gardening group her impulsive behavior has diminished, and she is now able to take part in social functions. As in the case of the other defective patient in the series, she imitates the other members of the group, with beneficial results.

Miss R. S.—This 35-year-old patient suffers from hebephrenic schizophrenia, and has been in hospital for 12 years. An initially poor response to physical therapy was followed by gradual deterioration to a point where she became mute, resistive, and negativistic. She showed no interest in her surroundings, but at times became extremely violent toward those around her. Her only activity on the ward was continual pacing of the corridor. She was always extremely untidy and, in spite of the efforts of the nursing staff, extremely dirty.

The effect of the gardening group on this patient has been to change an attitude of neglect toward her personal appearance to one of meticulousness. After a few weeks with the group, she surprised everybody by demanding a permanent wave, and since then, has insisted on having her hair set every day. She no longer paces the floor, but takes part in all social activities, including dancing. From being a completely isolated individual, she has become a member of a group, with a definite sense of being so.

Miss J. E.—This 25-year-old patient suffers from hebephrenic schizophrenia and has been in hospital since the age of 16. It was noted at the time of

her admission that in addition to being schizophrenic she was evidently mentally defective. Physical therapy did not help her and she became impulsive, restless, violent, resistive, and negativistic. She took no interest in her personal appearance, continually interfered with other patients and was filthy in her habits.

Her improvement since joining the gardening group has been appreciable, in that she is now more co-operative to nursing care and takes more interest in her personal appearance, but her improvement has not been so satisfactory as in the case of the other patients in the group.

CONCLUSIONS

The results we have recorded represent no new discoveries. The beneficial effects of suitable occupation in mental illness have been known since the time of Pinel. It is our contention, however, that the staffing and administrative problems of mental hospitals may lead to this form of therapy being available only to the "good" patients and to a neglect of the principle(3) that work *per se* is not the main thing. We have endeavored to show that, provided it is adapted to the patient's particular needs, occupational therapy can improve the condition of even the most "hopeless" cases. Of the 14 patients who participated in our pilot project, only one has failed to show a striking degree of improvement. The other 13 are still mentally ill, but in relinquishing their positions of isolation, they have become better adapted to the hospital environment. This improvement of interpersonal relationships has been accompanied by reduction of socially ill-tolerated habits, to such a degree that in 2 cases the relatives wish the patients to return home.

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THE GANSER SYNDROME

A REVIEW AND ADDITION OF SOME UNUSUAL CASES

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In 1898 Ganser(1) described a specific "hysterical twilight state" the chief symptom of which he called *Vorbeireden*. This symptom was subsequently also called *Danebenreden*, paralogia, and the syndrome of approximate answers. As is well known, these terms apply to the patient's inability to answer precisely, when requested to do so, familiar and simple questions, though it is apparent that the content of the question was understood. These unusual, approximate responses are spotty and are not impaired for all questions; they are usually tendered with care and deliberation.

Although *Vorbeireden* is the central symptom of the Ganser reaction, all of the originally described patients also manifested multiple "hysterical" motor and sensory stigmata, transient excitements, anxiety, uncertainty, an air of detachment, illusions, visual and auditory hallucinations, and sensorial clouding. The clinical picture has been likened to an acute hallucinatory "confusion" of the organic type. In Ganser's cases, and in many subsequent reports, the reaction subsided in a few days leaving the patient with amnesia for the period of psychosis.

Since that time most of the cases have been reported to occur in a prison setting, and the syndrome is often described as a form of prison psychosis. The exact incidence in groups of prisoners has been considered as being quite low; thus Estes and New(5) collected 50 cases among 8,000 army prisoners studied by them. However, Ganser's syndrome does occur in civil practice; Jolly(6) stated that one-third were noncriminal civilians and Henneberg(7a) gave this figure as 20%. Flatau(8) reported 4 cases that he had seen outside prison walls and indicated that

the illness was occasioned by an emotionally traumatic, precipitating event often of a sexual nature, that the course was briefer, the clouding of consciousness was less intense, and the number of approximate answers fewer.

The symptom of *Vorbeireden* itself, whose description is usually ascribed to Ganser, was originally uncovered by Moeli(2) in his study of psychotic prisoners. Its genesis has been much debated and it has often been used as synonymous with the symptom complex. Ganser(3) remarked that *Vorbeireden* alone occurs during the course of other psychoses and Vorster(9) mentioned that it occurred in 21% of his group of catatonic patients. Besides being seen in schizophrenic individuals (9), the symptom alone has been described in manic and demented patients(7b). Even today the separation between symptom and syndrome is still evident; in Henderson and Gillespie's textbook(10) only the symptom is mentioned.

There have, however, been very few cases reported of the entire syndrome occurring during the course of other major psychiatric disease entities(9, 11). Anderson and Mallinson(11) in 1941 reported 3 cases of the syndrome, one in a patient suffering a schizophrenic reaction and also in 2 patients who suffered a severe depressive illness. We have not been able to find any reports of patients suffering of the Ganser syndrome who were demented as well.

Although there are no extensive investigations into the psychopathology of the syndrome or symptom, there is considerable literature as to etiology on purely clinical grounds. Most authors agree that the reaction is a psychotic one(2, 9, 11, 12). Kraepelin(13) and Bumke(14) believed that the syndrome was of an hysterical nature, others (8, 1, 15) including Ganser(1) concurred with the latter because of the presence of multiple stigmata of conversion hysteria and amnesia. The premorbid personality of these

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patients was representative of an hysterical character disorder(6, 8, 9). The occurrence of amnesia as part of the syndrome led Bumke(14) to state that it must needs be hysterical, as amnesia for a traumatic emotional experience occurs only in hysteria. In support, Vorster(9) mentions that schizophrenic patients may give senseless and irrelevant answers rather than approximate ones. The schizophrenic individual utters his answer explosively and rapidly and not with deliberation(16). As further evidence of the hysterical nature of the condition, Higier(17) reported that approximate answers may be elicited after hypnosis in hysterical personalities and "normal" individuals to whom this form of response has not been suggested.

On the other hand, many authorities have insisted that the syndrome is basically a manifestation of the schizophrenic reaction, and in particular of catatonic negativism(16, 18). Bleuler(20) and Mayer-Gross(21) contend that if these patients are followed long enough some eventually suffer schizophrenic reactions. More recently, Estes and New(5) from their study of a group of prisoners conclude that the predominant motivation for this reaction is one of escaping an intolerable situation and substituting a pleasurable phantasy, thus making it similar dynamically to conversion hysteria. However, they conclude that the clinical picture is most likely of acute schizophrenic origin.

Another theory of the etiology of the Ganser syndrome holds that it is a manifestation of malingering. The reason for so stating is that the simulator's concept of abnormal behavior is one of exaggerated nonsense leading to the bizarre approximate answer. Other reasons, however, for casting doubt on this hypothesis are that the type of response is uniform and remarkably similar irrespective of the regional origin of the patient, and that the response itself is never proffered unsolicited. Today, it is agreed that malingering is rare and that malingering and hysteria in all probability form two ends of a spectrum(21). The former is in itself considered by some to be a symptom of an underlying psychological illness(22, 23). Somewhat analogously, Stern and Whiles(12) believe that the Ganser syndrome occurs in individuals, who, although psychologically ill do not realize it,

yet wish to appear so. They conclude from their study of *Hamlet* that the motive for the symptom is conscious—though "this be madness yet there is method in it." Golden(23) has described the case of a soldier who suffered pseudodementia, a Ganser syndrome, hysterical anesthesia and analgesia, incontinence, immobility, and who, when this picture cleared, was amnesic for the entire episode. He was able to show that the symptoms of pseudodementia were simulated whereas the rest of the picture was unconsciously determined.

In other papers, the Ganser syndrome is ascribed to alcoholic excess(24) or head injury(25). As Flatau(8) has pointed out, however, the personality of these patients was uniformly hysterical. Still other authors hold that the answers are suggested to the patient by the absurd question or by frequent questioning(19, 26), or are the product of inattention, purposeful evasion or suppression.

The purpose of this paper is to indicate that this syndrome is more frequent in civilian practice than suspected, that the syndrome and not only the symptom, may occur in the course of other significant psychiatric entities, and that despite this its characteristics are unchanged from the original description.

CLINICAL MATERIAL

In the course of one year, 6 cases of the Ganser syndrome have been observed on the psychiatric wards of the Strong Memorial and Rochester Municipal Hospitals. Five of these patients—4 women and 1 man—were noncriminals, and one patient, a man, was a prisoner serving sentence for manslaughter. During the same period, 1,099 cases of various kinds were admitted to these wards. It is of interest, therefore, that although our samples are considerably smaller, the incidence in our group is comparable to that in the only recent study of a large group of military prisoners(5).

We shall not describe in detail 3 of our cases as they demonstrate no features that have not been recorded previously. Suffice it to say that all evidenced the acute onset of the Ganser syndrome lasting in 2 patients no more than 48 hours, and 10 days in the prisoner; that all had the characteristic stig-

mata of long-standing, severe hysterical character disorders, that in the 2 nonprisoners there was a history of symptoms of conversion hysteria both prior to and following the illness, and amnesia with loss of personal identity (Table 1). In each case, a definite precipitating event was evident, in one case the patient was being hounded by her creditors, in the second case the patient was apparently obtaining drugs under false pretenses and was under surveillance by the law; the third patient was serving a prison sentence.

CASE I.—This 21-year-old single man entered the emergency division of Strong Memorial Hospital in February 1953, after a period of amnesia which had lasted about 3 hours. The last thing the patient could remember was having supper with a woman friend. He had been talking to her when he suddenly had a feeling that he had to leave, apparently associated with heightening symptoms of anxiety, relieved only by running. These abated and the patient returned to his friend's house, where the two proceeded to have dinner, then decided to call a mutual male friend. As the patient was going downstairs to telephone, he suddenly felt a severe pain in his left side, lost all sensation in that side, and collapsed. He had little memory for the next 3 hours except for a vague impression of many faces, of voices, of "scenes" of his past military service, and "a vision" of a dead friend and a highschool sweetheart. He was brought to Strong Memorial Hospital as a transfer from another hospital whose doctors forwarded a report that the patient had talked incoherently about his military experience and his work. He had not known who he was or where he was. He was hyperventilating to the point where he finally developed carpopedal spasm.

Physical examination on admission was entirely negative.

Mental status examination showed a tense, quiet,

serious young man who was extremely restless and paced up and down the room. He related well to the examiner and spoke quietly, calmly, coherently, but was unable to account logically for his state of amnesia and spoke of it with drama and puzzlement. His mood was entirely appropriate, he seemed mostly bewildered, and his affectual responses were intact. Retrospectively, his hallucinations were mentioned. Orientation as to time and place was accurate but he stated that he was still at the hospital from which he had just been transferred. Recent memory was otherwise good as was his remote memory. He was able to do 6 digits forward and 3 backwards; he calculated as follows: $4+2=6$; $4+4=9$; $6+4=12$; $9 \times 9=18$; $11 \times 11=121$; $6 \times 6=36$; and $5 \times 6=30$. He stated that a large horse had 6 legs, was unable to tell when the War of 1812 had occurred. He seemed puzzled by the question of how many legs a 3-legged stool has. He serially subtracted quite poorly, started with $100-7$ equaling 92, 85, 78, 71, 64, 54, 44. Otherwise his answers were entirely correct.

Laboratory examination was negative as was his electroencephalogram; skull films were unremarkable.

Family History.—The patient's father was 48 years old and native born. He was described as a gruff, independent, stubborn individual who "wouldn't take anything from anybody" and demanded immediate obedience. His mother was 47 years old. She had acted as a foster mother for a local charity, in addition to bringing up her own children. She was described as a high-strung histrionic person who often complained of her children's ingratitude. There were 2 younger brothers, the older of whom had been a source of rivalry, overt hatred, and bitterness to the patient. He graduated from high school at the age of 18 after a lackluster career, and was in the U. S. Marines from August 1950 to February 1952. In June 1951 he volunteered to go to Korea in order to "kill." During his service there, he had frequent bouts of amnesia which never lasted for more than 2 or 3 hours. (However, according to his parents, the patient was never sent overseas.) Following dis-

TABLE 1
SUMMARY OF CASE MATERIAL

| Case | I Hysterical paranoid Compulsive average | II Schizoid | III Hysterical G.P.I. Borderline low | IV Hysterical dependent Average | V Hysterical | VI Hysterical prisoner Average |
|---|--|----------------|--|--|-----------------|---|
| Premorbid personality | | | | | | |
| Intelligence (tested) | | | | | | |
| Symptoms: | | | | | | |
| 1. Vorbeireden | x | x | x | x | x | x |
| 2. Fugue | x | x | x | x | x | |
| 3. Amnesia with loss of personal identity | x | x | x | x | x | x |
| 4. Conversion symptoms | x | x | x | x | x | x |
| 5. Sensorial defects | x | x | x | x | x | x |
| 6. Depression | x | x | | | | x |
| 7. Anxiety | x | x | x | x | x | x |
| 8. Excitement | x | x | | | x | x |
| 9. Hallucinations | x | x | | | | x |
| 10. Perplexity | x | x | x | x | | |

charge in 1952, he went to work in a factory but found the adjustment difficult; his superiors angered him because he felt he was too closely watched. At times, also, he thought that they harbored derogatory thoughts about him.

The patient had never had any sexual instruction; started going out secretly with girls when he was 13. Since his "return" from Korea he and a male friend had platonically befriended a girl. In July 1952 while the 3 friends were riding in a car the patient was thrown against the door and immediately thereafter he developed severe pain starting in his groin and spreading up his left side, radiating to his toes, and associated with paresthesiae and weakness of the entire leg. After a short time, the pain and weakness disappeared spontaneously and never recurred. In the recent past the patient and his friend had competed more actively for the girl's favors.

He characterized himself as suspicious, shy, independent, aggressive, cold, and easily roused to anger which he directs at inanimate objects.

Psychological testing done on the fourth hospital day indicated that "the patient was being overwhelmed by anxiety, relative to sexual conflicts. As the result of the anxiety and guilt invoked in the present situation he appears to be having the beginnings of idea of references together with some eccentric behavior. This underlying, incipient malignant process is not to be overlooked. Although he typically represses and intellectualizes there are also hysterical features. If any mechanisms are basic it appears to be repression and denial in all areas of functioning—emotion, sex, aggression."

Course.—Patient remained in the hospital for 12 days. After 24 hours, the Ganser syndrome had disappeared and he had no further bouts of amnesia while in the hospital. However, he remembered none of the details of his admission.

In summary, this patient demonstrated a Ganser syndrome characterized by amnesia, with loss of personal identity, a brief fugue, visual and auditory hallucinations, subjective loss of sensation on the left side of his body, transient excitement, and the syndrome of approximate answers. In the past, he had had repeated bouts of amnesia and conversion hysterical symptoms, the last bout of which occurred in a setting of sexual stimulation and competition; his present illness had apparently begun under similar circumstances. In addition, the patient had character traits suggesting, at least, a paranoid personality coincidentally developing ideas of reference and persecution. No major thought disturbances or affective change were present and no other blatant symptoms of a paranoid schizophrenic reaction occurred.

CASE II.—This 30-year-old, married, Negro woman was admitted to Rochester Municipal Hospital in August 1952. It was learned that 2 days prior to admission, she appeared at her sister's house stating that "someone wanted to kill the both of us." At that time, she looked apprehensively out of the window at the passengers of passing cars for possible assassins. That night and the following day, the patient remained secluded in her sister's

room reading the Bible. In the evening, she went to a Christian Science meeting, during the middle of which she went down to the basement and attempted suicide to avoid the homicidal wrath of other members of the congregation. She was restrained, became excited and incoherent and was brought to the Rochester Municipal Hospital.

It was stated that she had always been quiet, prudish, stubborn, inflexible and hard working and that after joining the Christian Science movement she had claimed that she could read other people's thoughts and divine the motives behind their acts. Her only interest besides her work was religion.

Physical examination on admission was negative. The patient lay motionless in bed, speaking in a rambling, incoherent manner. She seemed hostile, resistive, distant, preoccupied, related poorly, was affectually inadequate. Her thought content was overtly sexual. She reported that she saw snakes and that she smelled and tasted ether and gas in her room. At times, she was mute, negativistic, and lay motionless in bed, posturing. Later, she expressed the idea that she was already dead, and that the hospital was persecuting her because of her color. She intimated that the hospital personnel was interested in her sexually. The day following admission her behavior changed. She became talkative and coherent and insisted that she had no memory for anything that had transpired since attending the Christian Science meeting. She wondered if she had been in an airplane accident; did not recognize the house physician who had previously cared for her, claiming that this was the first time she had seen him. She did not know her name and failed to recognize it when it was told to her. On being questioned she stated that a 3-legged stool had 9 legs; and when asked how many legs a large horse had, she said that she had never heard of such a horse, however, a small horse she believed had 5 legs. She did not think there was a war in 1812, when asked its date; a wrist-watch, she called a compass; a pen, a thermometer; a pencil, an ice-pick; a key, a can opener; a notebook, a pocket book; a cigarette, she did not know; and called an address book a Bible; she was quite apathetic and dull, but rather characteristically answered the questions slowly and thoughtfully. The following day the patient remembered nothing of the previous day's events and no longer gave the above answers; she was now quite preoccupied, at times mute, lying on the floor in a puddle of urine.

On the third day, the patient was again in good contact, began to eat and sleep and was able to recount the story of events leading up to her hospitalization; but now she used many neologisms.

Later, prior to transfer to another hospital, she relapsed into a stuporous state. There she received 6 electroconvulsive treatments and was very much improved 3 months later.

Her illness had apparently begun very rapidly and initially had most of the characteristics of an acute catatonic schizophrenic reaction. One day later the patient manifested a complete change of behavior, was able to relate well and was coherent, but she had amnesia for her previous psychotic be-

havior, had lost her personal identity, showed clouding of consciousness and gave typical Ganser answers. Within 24 hours she again relapsed but this time the period during which she presented Ganser's syndrome was no longer remembered.

CASE III.—This case is unusual in that it represents a case of Ganser's syndrome occurring briefly in a patient suffering of paretic neurosyphilis.

This female patient, 40 years old, twice married, was brought to Strong Memorial Hospital in September 1953, accompanied by a police officer whom she had accosted on one of the main thoroughfares of Rochester, to ask him who she was, what city she was in, and what she was doing here. On questioning by the officer at that time, she had no idea of the events of the previous 2 days, incorrectly stated she was unmarried, lived in an adjacent big city, and was 50 years old.

She was born in Kentucky, had received a grade school education, had been married once in her twenties, divorced and remarried at the age of 34. For some time her husband had noticed that her memory was poor and had believed she was "faking." She was said to be an excitable, childish, and self-dramatizing person.

In 1951, while attending a party of friends, she had lost consciousness for several hours and on regaining it, had weakness of her right arm and leg. This episode was considered to be "hysterical" by her physician.

Physical examination was unremarkable except that her right pupil was mydriatic, irregular and responded on convergence but not to illumination; the left was small and showed both a light and convergence reaction. The patient claimed weakness of her right arm and leg, but with encouragement strength and tone were comparable to the left side and the deep tendon reflexes were intact. There was a clear-cut, midline loss to all sensory stimulation on the right side, not including the tongue or buccal mucosa and the corneal reflexes were intact.

The patient seemed gay, related well in a pleading way and seemed perplexed; she spoke slowly in a childlike, lisping manner with no trace of dysarthria. No abnormal mental trends obtained. Her main concern was for her dog. She gave her name, age, and home address incorrectly; was disoriented as to time and place; remembered the details of her admission, but for the 2 days prior to admission had no memory. She could not calculate at all, stated that $3 + 4 = 8$, $4 + 5 = 10$, a small horse had 3 legs, a large horse 5, and could not identify simple objects.

This condition lasted 4 days, by which time her motor and sensory disturbances were no longer present. Now she knew her name and address but did not remember the details of admission nor the previous events of her hospitalization, her remote memory was vague; she calculated moderately well, knew the names of objects, and gave the correct responses to simple questions about horses. She performed serial subtraction with heightened effort.

Laboratory tests were unremarkable including a

chest X-ray; however, her blood and spinal fluid Wassermann reactions were strongly positive. The cerebrospinal fluid was under a pressure of 90 millimeters of water; C.S.F. protein content was 25 milligrams per 100 cubic centimeters, and contained 3 large mononuclear cells; the colloidal gold curve was of the second zone type. An electroencephalogram was interpreted as showing medium voltage with a basic frequency of 9-11 cycles per second, and contained scattered waves and short runs of medium voltage 5-7 cycles per second and 15-20 cycle/second activity. Psychological tests revealed a performance I.Q. of 68 and evidence of dementia and "organic" deterioration; in addition "there is in this patient a good deal of anxiety about her recognized dementia and about the seemingly hostile reactions of her husband to her illness."

Later the patient showed multiple but transient conversion hysterical sensory symptoms.

In summary, the patient demonstrated while suffering from paretic neurosyphilis, which had already led to a considerable degree of dementia, a fugue with amnesia, loss of personal identity, hysterical sensory disturbances, child-like speech and behavior, clouding of consciousness and approximate answers. These disappeared in 4 days, leaving an anxious, perseverating, demented woman.

DISCUSSION

The object of this report is to point out again that the Ganser syndrome may arise not only in hysterical character disorders but also during the course of other major psychiatric illnesses. Furthermore, that its over-all incidence, though rare, is not as uncommon in civilian hospital practice as most modern textbooks might indicate.

In each of these cases, the diagnosis of Ganser's syndrome rested upon the presence of the symptom of *Vorbeireden*, and at least one of the other symptoms described by Ganser in his original paper (Table 1). The most common findings were amnesia with loss of personal identity, clouding of consciousness, and *Vorbeireden*, which occurred in all 6 patients; conversion symptoms of the anesthetic, hypesthetic, or paralytic type were present in 5; a fugue ushered in the illness in 4; the same number showed perplexity, anxiety or transient excitements; and 2 patients had both visual and auditory hallucinations.

As regards the approximate answers, it has been apparent that not only are they remarkably similar to the same questions in all our patients, but that added effort seems to be exerted by the patient. It would seem more difficult and require an excess of "energy" to

answer that 2 and 2 are 5, than that they are 4. The thoughtfully slow manner in which the answer is given might substantiate this idea which, if correct, leads to the thought that such answers serve a psychological purpose.

We are in agreement with previous authors (3, 8, 11, 12) that patients suffering from the Ganser syndrome are psychotic.

It is true that much of their overt activity usually remains purposeful but as has been indicated by Geleerd and his fellow workers, in the case of amnesic episodes in general, "the ego has lost one of its most important integrative functions, that of maintaining the sense of position in time and space, the feeling of personal continuity, of sameness, and of 'me-ness.' The core of the ego, the consciousness of itself as being distinct from the outside world and everybody else, has been temporarily given up" (27). Fisher (28) considers that fugues, which occurred in 4 of our patients, stand somewhere between a neurosis and a psychosis, and do not only represent simple, hysterical conversions.

In examining the setting in which this syndrome occurred we have been struck by the fact that there is generally an overt stress of some severe kind, either external or in the form of a major illness. As previously indicated, of the first 3 patients with a classical syndrome, one was serving a prison sentence, and the other 2 were faced respectively with bankruptcy and a narcotics charge. In the other patients, one was suffering from a decompensating paranoid character disorder, one from a schizophrenic reaction, and the last from paretic neurosyphilis.

Although we have made no detailed study nor do we have confirmatory evidence of the psychodynamic factors in this illness, we tentatively propose that the Ganser syndrome in these patients is a reaction to intolerable stress with a feeling of utter helplessness. This was most evident in the second and third cases described who verbalized their feeling directly or symbolically that a disaster had occurred to them for which they had no explanation either to themselves or others. (Psychological tests in those cases when they were done bore out this impression.)

This sense of helplessness in some of the cases is imposed by external reality (Cases

IV, V, VI); in others it is secondary to inner impulses which are overwhelming (Cases I and II) to the individual and have resulted in behavior they cannot understand, or to psychological difficulties leading to accusation on another's part. In this setting, the Ganser syndrome develops. Many of the symptoms such as the anxiety and excitement are nonspecific. The 2 symptoms that are uniformly present and characteristic of the Ganser syndrome in our cases, however, are (1) amnesia with loss of personal identity, (2) *Vorbeireden*.

It is our proposition that both of these symptoms represent unconscious desperate attempts by the individual to deceive himself and others by casting off or concealing his intellect and personal identity. It is as if the patient were indicating to himself that he could not be held responsible for his actions, past or present. He indicates this by losing his personal identity and the ability to answer simple questions. Why then are the answers thoughtfully given and so similar in all cases? We suggest that this is but an unconscious elaboration of this denial of their behavior which may seem so transparent to the examiner. The answer itself and its content is rendered with care and thought, so as to indicate effort, the absence of obvious simulation and yet it is approximate so as to promote the initial illusion of lack of culpability.

In all these cases, irrespective of whether the cause of it is external or within the patient these unconscious mechanisms would seem to represent a desperate attempt to overcome the anxiety and helplessness engendered by the potentially adverse results of the patients actions or illness.

SUMMARY

1. Six cases of Ganser's syndrome are described, one occurring in a male prisoner, 5 occurring in civilian patients of whom 4 were women and one a man.

2. Three patients who are described in detail developed the syndrome intercurrently during other serious psychiatric illnesses.

3. It is pointed out that although the symptom of approximate answers has often been described as occurring in various entities, the syndrome as originally defined has rarely been so reported.

4. Certain clinical features are commented upon, in particular the coincidence with approximate answers of amnesia with loss of personal identity.

5. A possible explanation of some aspects of the Ganser syndrome is tendered.

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USE OF WHOLE PROTEIN SUPPLEMENT AS AN ADJUNCT IN INSULIN COMA THERAPY¹

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Delayed adverse reactions following insulin coma therapy are an ever present problem, and must be prevented, if possible. These reactions may be mild or severe, occurring immediately following procedures to terminate the coma, or after a delay of 8 to 10 hours or more. Delayed adverse reactions may range from prolonged or irreversible coma to the milder types of reactions such as nausea, vomiting, or inability to consume the noon or evening meal. Any type of delayed reaction is a painful experience and an ordeal for each patient involved.

In an effort to reduce the frequency and severity of these delayed adverse reactions, we instituted a study, using a whole protein supplement (Meritine) plus supplementary vitamins and minerals to interrupt the insulin coma, and also as supplementary feedings throughout the day of treatment. Revitch and Hirschfield² have used this same product for the feeding of patients after termination of insulin coma treatment and have reported favorable results in the reduction of early and late secondary reactions.

METHOD

Over a period of 8 months the Meritine procedure was used on alternate weekly periods as a comparison with our standard procedure of interruption of coma, special attention being given to delayed adverse reactions of all types, frequency, duration, and corrective procedures requiring glucose infusions or additional medications.

Our standard procedure of interruption consisted of administering 300 to 400 cc of a 50% dextrose solution by intubation, with or without intravenous administration of 50 to 100 cc of 50% glucose solution. Each patient also received 6 to 8 ounces of this dextrose solution mixed with fruit juices at 2:00 p.m., and 8:00 p.m., as supplementary feedings.

The Meritine procedure of interruption

consisted of administering 500 cc of the above dextrose solution, mixed with 2 ounces of Meritine powder, 1 cc Vitamin C Solution (Cecon) and 5 cc Triple Phosphate Solution (Lilly) by intubation with or without intravenous 50% dextrose. Each patient also received 6 to 8 ounces of milk and dextrose solution containing 1 ounce Meritine powder at 2:00 p.m., and 8:00 p.m. In addition each patient received 1 concentrated multiple vitamin tablet (Theragen) at 2:00 p.m.

RESULTS

During the period April 24, 1953, through December 31, 1953, 86 patients were treated with a total of 1,555 treatments and 758 comas. Length of coma was from 45 to 60 minutes.

COMPARISON IN INSULIN DEPARTMENT

| | Oral without tubing or I.V. | Tubed without I.V. | Tubed with I.V. | Oral and I.V. | Total I.V. |
|-------------|--------------------------------|-----------------------|--------------------|------------------|---------------|
| Dextrose .. | 190 | 124 | 273 | 295 | 568—64% |
| Meritine .. | 160 | 169 | 280 | 314 | 494—64% |

COMPARISON ON WARD

| | Infusions necessary because of refusal or inability to eat lunch |
|-------------|---|
| Dextrose .. | 56—6.35% |
| Meritine .. | 63—6.82% |

| | Delayed reactions, mild (requiring infusions or 50% glucose I.V.) |
|-------------|--|
| Dextrose .. | 15—1.70% |
| Meritine .. | 8—0.86% |

| | Delayed reactions, severe (these were mainly delayed awakenings with con- fusion and excitement requiring I.V. fluids and I.V. sedative) |
|-------------|---|
| Dextrose .. | 3—0.34% |
| Meritine .. | 1—0.09% |

¹ From the Neurological Hospital, Kansas City, Mo.

² Revitch, Eugene and Hirschfield, Reizel. Am. J. Psychiat., 108:703, 1952.

DISCUSSION

The results of the above percentages would indicate that the use of Meritine is of some value. However, because of the small series of patients treated no definite conclusions are formed.

The occurrence of delayed adverse reactions(9), both mild and severe, occurring in the afternoon or evening hours clearly indicates that we did not achieve our ultimate goal with the Meritine procedure.

As one may note, the percentage of intravenous glucose infusions given in the insulin department and also on the wards because of the patients' inability or refusal to eat the noon meal are approximately the same in both procedures. This is to be expected as carbohydrate metabolism takes place more rapidly than protein metabolism. To explain the necessity of this large number of glucose infusions administered when patients were unable or refused to eat the noon meal many assumptions may be made. It has been our policy to administer more dextrose solution, either orally or by intubation in the interruption of the insulin treatment than some authorities have recommended. This is administered rather late in the morning and close to the noon meal. Perhaps we have been overloading our patients, and even with their refusal to eat the patients might avoid a delayed adverse reaction. Our experience has been otherwise and our group believes that any refusal to eat should be covered by dextrose administered intravenously. Undoubtedly many of these infusions may have been unnecessary.

The sustained benefit of the protein solution is quite evident in the reduction of delayed adverse reactions occurring in the afternoon and early evening periods.

Our attention has been directed to the excellent results obtained by the use of Hyalu-

ronidase (Wydase) as an adjunct in insulin coma therapy, for the same purpose as outlined in this paper. We believed that the continuation of our Meritine procedure, which is moderately expensive and time-consuming for our nursing staff, may not be warranted. We are now working with Wydase as an adjunct in our insulin coma therapy for comparison with that of Meritine, to determine which is the more efficacious in the prevention of delayed adverse insulin reactions. To date the results with Wydase are quite encouraging. It may well be that we shall eventually develop a procedure combining both the Meritine and Wydase in an effort to further erase the occurrence of delayed adverse insulin reactions.

SUMMARY

A study with the use of a whole protein supplement and dextrose solution administered orally or by intubation as an adjunct in interruption of insulin coma was conducted to determine if this procedure was more efficacious in reducing the frequency and severity of delayed adverse reactions than the administration of a 50% dextrose solution alone for interruption.

Results of study indicate that delayed adverse reactions were reduced approximately by one-half with the whole protein supplement procedure.

There is not much difference in the amount of intravenous medications required in either procedure, both in the insulin department or on the wards, because of patients' refusal or inability to eat lunch.

The patients themselves greatly preferred the whole protein supplement to the dextrose solution and it seemed to satisfy their hunger. Also, much less vomiting was noted in patients receiving the whole protein supplement.

THE PSYCHIATRIC RESOURCES OF NEW JERSEY

HENRY A. DAVIDSON, M.D., CEDAR GROVE, N.J.

New Jersey was the scene of Dorothea Dix's first triumph. For the New Jersey State Hospital at Trenton was the first state institution built because of her efforts. That was in 1845. And it was to the Trenton State Hospital that she returned in 1881, where she remained until her death in 1887, an honored and beloved guest. The room in which she lived is preserved as a vivid memorial to one of the most valuable citizens of the nineteenth century and as a memento of one of the most effective crusades in history.

New Jersey's state psychiatric institutions include 4 state hospitals for the long-term care of the mentally ill; 4 schools for mental defectives; a residential diagnostic center; a state child treatment center; a residence center for the intensive treatment of youthful offenders; and a research-oriented neuropsychiatric institute.

These institutions are under the supervision of the State Department of Institutions and Agencies, which controls as well the state sanatorium, board of child welfare, penal and correctional institutions, and several special agencies for assistance to various categories of welfare clients. The Acting Commissioner is Dr. F. Lovell Bixby. The Director of Mental Hygiene and Hospitals is Dr. Edward N. Pleasants, a Fellow of The American Psychiatric Association.

The state hospitals are at Greystone Park (average census 6,600), Trenton (4,300), Marlboro (3,200), and Ancora (near Camden) which will soon receive patients, and has a capacity of 3,000. Greystone Park (which is near Morristown) is the institution referred to in the second half of the phrase "Columbia-Greystone" Associates, by which the pioneer topectomy project is identified. Marlboro is near Asbury Park.

Six counties also operate hospitals for the long-term care of the mentally ill. These are at Cedar Grove¹ (Essex County), Secaucus

(Hudson County), Northfield (Atlantic County), New Lisbon (Burlington County), Bridgeton (Cumberland County), and Grenloch (Camden County).

For the care of the mentally deficient, there are 2 state institutions for males (Woodbine and New Lisbon) and 2 for females (Totowa and Vineland). The Vineland State School is across the street from the famous Training School, the institution where H. H. Goddard did much of his pioneer work in psychometrics. It was at Vineland that the Binet-Simon tests had their first large-scale usage in America.

The Neuro-Psychiatric Institute (formerly the State Village for Epileptics) applies intensive treatment and research to psychotic children, alcoholics, drug addicts, sex offenders, and epileptics. This is at Princeton. The Institute includes, as one of the state's currently valuable assets, Dr. Nolan D. C. Lewis, who is Director of Research there.

Unique among correctional institutions—if it can be called an institution at all—is "Highfields," an experimental project for youthful offenders, housed in the former Lindbergh estate at Hopewell. Colonel and Mrs. Lindbergh donated this property to the state so that it could be used to advance the cause of welfare of youth and children. With the aid of grants from the New York Foundation, Highfields is being operated as a small home for youthful offenders who are, to all intents and purposes, as free as if they were on probation. It represents an extraordinary experiment in day-by-day group therapy, and is being watched with considerable interest as one of the few practical mergers of psychiatry and penology ever to be placed in operation. Less than 2 years old, the project has not reached the stage where long-range evaluation can be made, but prelimi-

Sutton, is an A.P.A. auditor. The present assistant superintendent is Henry A. Davidson, an A.P.A. councillor and the Association's parliamentarian. The Essex County Hospital, locally known as Overbrook, is one of the largest county-operated mental hospitals in the country.

¹ After his A.P.A. presidency, the late Dr. Samuel W. Hamilton became Superintendent of this hospital. The present Superintendent, Dr. Joseph G.

nary results have been encouraging. The Vincent Astor Foundation has made grants to New York University for research, and an evaluation study began in March 1951 under direction of the Department of Sociology of New York University.

The Diagnostic Center at Menlo Park (near New Brunswick) is another unique institution. It provides both inpatient and outpatient diagnostic services in all facets of psychiatry, psychology, neurology, and social studies, and is used principally, but not exclusively, for the evaluation of young violators of the law or persistent antisocial behavior. The Center also receives persistent sex offenders sent by the courts for psychiatric study, diagnosis and recommendations.

One of the nation's few state-operated treatment centers for emotionally disturbed children is the Arthur Brisbane Center at Allaire, near Freehold. Housed on an estate donated by the family of the late journalist, Arthur Brisbane, this Center provides diagnostic and therapeutic facilities for prepsychotic children or for those suffering from "primary" behavior disorders of all sorts.

The Veterans Administration Hospital at Lyons (near Plainfield), is a 2,000-bed, predominantly psychiatric institution that has pioneered in special forms of electric shock therapy and in advanced professional education in psychiatry.

Insulin and other shock therapies have been extensively applied by the state hospitals ever since they were introduced. Greystone Park furnished most of the source material and facilities for the now famous topectomy study⁽¹⁾ generally called the "Columbia-Greystone Associates Project." This project grew out of a course given under the auspices of the New Jersey Neuro-Psychiatric Association in which Dr. Mettler was one of the lecturers.

New Jersey has 109 general hospitals. Eight of these⁽³⁾ have both inpatient and outpatient psychiatric facilities for males and females with a total of 220 beds. A survey is presently being conducted by the Department of Institutions and Agencies to determine the clinic services and outpatient department services available. The largest psychiatric section in a general hospital is the 150-bed neurology and psychiatry service at

the Veterans Administration Hospital in East Orange.

In the field of outpatient services, New Jersey was one of the first to establish the modern type of child clinic. The late Dr. James S. Plant set up, under the auspices of the Overbrook Hospital, the Essex County Juvenile Clinic in 1924, providing one of the first "team approach" clinics in the country. New Jersey at present has a network of mental hygiene clinics under the aegis of the state hospitals, but operated by specially selected outpatient staffs. These clinics are in: Atlantic City, Bayonne, Camden, Englewood, Franklin, Freehold, Hackensack, Linden, Morristown, Newark, New Brunswick, Passaic, Paterson, Perth Amboy, Red Bank, Somerville, Toms River, Trenton. They provide a general community psychiatric outpatient service. Some offer service to hospital patients on trial visit.

County operated clinics are in Camden, Essex, and Union Counties. Clinics operated by the outpatient departments of community or city hospitals are in: Atlantic City, Camden, East Orange, Englewood, Flemington, Hackensack, Jersey City, Long Branch, Newark, Passaic, Paterson, Princeton, Riverside, Trenton. Community clinics not affiliated with hospitals are in: East Orange, Montclair, Newark, Paterson, Princeton, Trenton.

In Newark there is a mental hygiene clinic operated by the Regional Office of the Veterans Administration for the outpatient treatment of eligible veterans service-connected for emotional disorders. Boards of Education operate child guidance clinics in Orange, Newark, and Jersey City.

The psychiatric manpower of New Jersey was the subject of a special study by Henry A. Davidson, which appeared in this JOURNAL⁽³⁾ in 1948. At that time Davidson concluded:

New Jersey, a state with a population of 41 million, has about 5,000 physicians; of these 262 are doing psychiatry, either full-time or part-time, in institutions or in private practice. Of these, 75 are board diplomats,² and 101 additional doctors (to a total of 176) are members of a recognized psychiatric association. Of the 262 psychiatrists, 112 are in private practice, 93 are employed by state or county hospitals or clinics, and 45 by the Veterans Ad-

² The number today is about 150.

ministration. Psychiatrists are available for private consultation in every county of the state except the 4 smallest,⁸ and each of these is adjacent to a county in which privately practicing psychiatrists have offices. Private psychiatrists are available at a ratio of 29,000 persons per practitioner, which is the average, though not the ideal figure.

Although no survey has been made since Davidson reported this study, very few psychiatrists have left the state in the last 4 years; and several new physicians have entered the specialty. In broad outlines, the figures reported in this survey are valid today.

No place in New Jersey is more than 2 hours' drive from New York City or Philadelphia. As a result, the state is a favorite place for private mental institutions, many of which are inspected and licensed as hospitals. In various parts of New Jersey are privately owned schools for spastic, disturbed, or retarded children.

The state has long been active in the general field of rehabilitation. Its Workmen's Compensation Bureau had one of the earliest general rehabilitation programs in the country. The Kessler Institute in West Orange (near Newark) is acknowledged as a pace-setting institution for the rehabilitation and training of patients with all sorts of long-term disabilities. It has been the site of one international and several national conferences on the subject.

The major instrument for citizen participation in mental health activities has been the New Jersey Welfare Council, a 55-year-old organization that provides both forums for discussion and mass support for action in the general welfare field. The Council has always had a strong mental hygiene orientation and was godfather to the recently organized State Mental Health Association.

New Jersey is the most populous state in the union without a medical school. The Seton Hall University was, in December 1954, granted a charter to set up a medical school in Jersey City. In addition, a legislative commission has recommended the establishment of a medical school in conjunction with Rutgers University.

In the absence of any currently-operating medical school, the obligation of furnishing

extramural graduate training in psychiatry has fallen largely on the New Jersey Neuro-psychiatric Association. For intramural training, psychiatric residencies are accredited at the Veterans Administration Hospital (Lyons), at the three State Hospitals, and at the Essex County (Overbrook) Hospital in Cedar Grove.

The New Jersey Neuropsychiatric Association was established in 1935. It has about 200 members and holds 5 or 6 scientific sessions a year. Since its founding, the Presidents of this Association have been: Drs. Christopher Beling, Ambrose Dowd, Lawrence M. Collins, Joseph G. Sutton, Lewis H. Loeser, Theodore R. Robie, J. Berkeley Gordon, Henry A. Davidson, Charles Englander, Crawford N. Baganz, David J. Flicker, Archie Crandell, Frank Pignataro, and J. Lawrence Evans, Jr.

The Association has sponsored training courses at various levels throughout its 20 years. It has organized and operated advanced courses, seminars for general practitioners, refresher courses, courses in basic neurology, neuroanatomy, neuropathology, and public educational programs. Some of these programs have been presented in collaboration with Rutgers University. Faculties for the courses have been recruited partly from the Association's own membership and partly from medical schools in Philadelphia and New York. The New Jersey Neuropsychiatric Association is an affiliate of The American Psychiatric Association.

New Jersey also constitutes a District Branch of The American Psychiatric Association.

New Jersey was the first state in the nation to have a parents' group for retarded children. There is now a State council the N. J. Association for Retarded Children with 14 units on a county basis.

New Jersey has been a staunch component of The American Psychiatric Association from the very beginning. Indeed, the second Secretary of The American Psychiatric Association, Dr. H. A. Buttolph, who served in 1852 and 1853, was a resident of Short Hills (Millburn), N. J. Three past presidents of The American Psychiatric Association were New Jersey residents: Dr. H. A. Buttolph (1886); Dr. Samuel W. Hamilton (1946);

⁸ New Jersey has 21 counties.

and Dr. G. S. Stevenson (1949). The current speaker of the A.P.A. Assembly, Dr. Crawford N. Baganz, is a New Jersey resident, as is the Association's Parliamentarian (Dr. H. A. Davidson), and one of the Auditors: Dr. Joseph G. Sutton.

In addition, New Jersey is well represented among the committee personnel of The American Psychiatric Association. Chairmen of the following A.P.A. committees are residents of the Garden State: Arrangements, Tellers, Veterans, Resolutions, and Economic Aspects.

This year marks the fifth time that New Jersey has played host to The American Psy-

chiatric Association. Previous New Jersey meetings (all in Atlantic City) were in 1909, 1912, 1924, and 1952. Atlantic City is the convention home of so many medical societies that it is an old familiar to most A.P.A. members. Coming to Atlantic City for an Annual Meeting in May is a pleasantly repeated ritual like coming home for Christmas.

Welcome!

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PRELIMINARY CLINICAL REPORTS

COMBINED RESERPINE-CHLORPROMAZINE THERAPY IN DISTURBED PSYCHOTICS

JOSEPH A. BARSA, M. D., AND NATHAN S. KLINE, M. D.
ORANGEBURG, N. Y.

This is a preliminary report of combined reserpine-chlorpromazine therapy on more than 250 disturbed psychotic patients.

The following dosage plan was evolved: The patient was started on 3 mg. reserpine and 25 mg. chlorpromazine orally once a day. After 10 days the chlorpromazine was increased to 25 mg. b.i.d. At the end of 3 to 4 weeks, if the patient was not showing satisfactory progress, the dose of chlorpromazine was increased to 50 mg. b.i.d., reserpine remaining at 3 mg. daily. After another 3 to 4 weeks, if the patient's progress was still unsatisfactory, 5 mg. reserpine intramuscularly was added to the oral regimen. This was continued for 10 days. If the patient then showed signs of responding to therapy, intramuscular medication was gradually withdrawn, but the oral medication remained unchanged until the close of therapy. If, however, after 10 days of intramuscular injections, the patient was not showing an adequate response, the intramuscular dose was raised to 10 mg. and was continued until the response was adequate; then intramuscular injections were gradually withdrawn, leaving only the oral medication. Treatment lasted a minimum of 3 months.

If at the outset the patient was extremely disturbed, and an early quieting effect was necessary, the patient was started on 5 mg. reserpine intramuscularly, and 3 mg. reserpine and 25 mg. chlorpromazine orally once a day. After 10 days the chlorpromazine was increased to b.i.d., and, if the patient's progress was satisfactory, the intramuscular in-

jections were gradually withdrawn; if progress was still unsatisfactory, the injections were continued for another 10 days. Then, if necessary, the intramuscular dose was raised to 10 mg. After improvement was sufficient to discontinue this initial course of intramuscular reserpine injections, the subsequent dosage was the same as outlined in the preceding paragraph.

In a previous paper by Barsa and Kline, "Use of Reserpine in Disturbed Psychotic Patients,"¹ Barsa distinguished 3 stages in the course of treatment with reserpine alone: the *sedative period* (sedative effect of the drug predominant); the *turbulent period* (behavior and symptoms grow worse); and the *integrative period*, in which the patient's personality is gradually integrated and the delusions and hallucinations disappear. In combined reserpine-chlorpromazine therapy, too, the patient usually passed through these 3 stages, except that as a rule the turbulent period was not so severe or protracted as in incombined reserpine therapy.

Chlorpromazine seemed to have a definite potentiating effect on reserpine. Many cases that did not respond adequately to reserpine alone, did respond to the combined therapy. In the majority of cases it was possible to achieve satisfactory results without the need of intramuscular injections. Furthermore, the course of therapy was less stormy and less distressing to the patient because of the milder and shorter turbulent period.

¹ Am. J. Psychiat. (In press.)

CORRESPONDENCE

INSULIN COMA THERAPY

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: In the December 1954 issue of your JOURNAL appeared an article, by Captain Joseph E. Lifshutz, MC, entitled "Insulin Coma Therapy."

After analyzing the clinical results in 89 patients who had received insulin coma therapy, and 89 controls, the author determined that this form of therapy has been of little value in the treatment of mental patients; also, that where ECT was used it was at least as effective as insulin coma therapy.

Whereas, I am inclined to agree that the results which Dr. Lifshutz obtained from insulin coma therapy were unsatisfactory (only 43% of patients receiving therapy were improved, much improved and recovered; 49% in the control group), I do not agree with his conclusions. I am of the opinion that his conclusions should be revised as follows: Insulin coma therapy has been of little value in itself in the improvement of patients who received it unless treatment is persistent, and it is not discontinued before at least 50 comas have been reached.

Kalinowski and Hoch, in their book "Shock Treatments, Psychosurgery and Other Somatic Treatments in Psychiatry," published in 1952, page 29, state:

Most workers apply 50-60 comas before they discontinue insulin treatment . . . Freudenberg states

that his best results are obtained when the therapist aims at a total of 50 comas, even if the patient remits early in the treatment.

In Dr. Lifshutz's study, 21 patients (almost 25% of all patients) had between 20 to 30 comas and the rest 30 or more comas. Nothing is mentioned in his paper about the duration either of the hypoglycemic state or coma, which are very important factors in determining positive results in this treatment.

In our hospital a full course of insulin coma therapy is considered to consist of 40-60 comas; and only in cases of rapid recovery does a patient receive fewer than 40 comas. The results which we have obtained over the past 5 years are significantly higher than those reported by Dr. Lifshutz.

Dr. Lifshutz's paper has led me to ponder the fact whether he has not perhaps repeated an error made by Dr. Borysevich in 1936, who also reported negative results with insulin coma therapy. Insulin coma therapy, according to Dr. Borysevich, did not exceed the rate of spontaneous remissions. But, a study of his paper revealed that the number of comas per patient was small, and the hypoglycemic state and duration of the coma were kept brief.

S. P. ALEXANDER, M. D.,
Rockland State Hospital,
Orangeburg, N. Y.

REPLY TO THE FOREGOING

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: The hypoglycemic state in our insulin tested patients lasted from 3 to 4 hours, averaging 3½ hours. The length of coma in each instance where coma was said to have occurred lasted 15 to 20 minutes. These statements are true of the year during which I administered the insulin, and judging from the earlier records they appear to be true of the period before I came to Madigan Army Hospital. This was the manner in which insulin was administered at the hospital

where I learned to use it, the Langley Porter Clinic in San Francisco, except that at the Langley Porter Clinic a course of insulin was considered to be 50 comas. When I arrived at Madigan Army Hospital, 30 comas had been considered a full course during the 21 months that insulin had been used, and in my year of its administration I continued the procedures as before.

I think the ideal insulin coma research project is yet to be done. A large psychiatric hospital should screen new admissions, rec-

ommending insulin when indicated, and every second patient so recommended should get it. The others should get all the hospital offered, but not insulin. Results should be gathered immediately after completion of treatment, and perhaps 1 and 5 years later. The *ex post facto* nature of most insulin research would then be avoided.

And still to be set up is a research method in some way evaluating the intense devotion

and affection given by most nurses and aides to patients subjected to deep coma. The greater the number of insulin comas the stronger the bond between treater and treated. At least that has been my observation, and I personally believe that it is by this mechanism that our most profound therapeutic benefits are effected.

JOSEPH E. LIFSHUTZ, M. D.,
Walnut Creek, California.

JACOBI TO OSLER

As the seventieth birthday (July 12, 1919) of the Regius Professor of Medicine at Oxford approached, his great friend Abraham Jacobi sent him this message:

"Seventy years—or any age—is no period for you. You are eminently the one, the indispensable man in Medicine—the indispensable man. Everybody feels that, knows that. The world is crowded with nonentities, but even they realize your superiority and feel grateful for your existence. So do I. Keep on."

—A. JACOBI

As he wrote, Jacobi was almost ninety. Osler's seventieth birthday proved to be his last, and Jacobi did not reach his ninetieth.

SALMON LECTURES, 1954

The Thomas W. Salmon Lectures were given last December in New York City by Professor William A. Hunt, head of the department of psychology, Northwestern University. His subject was the relations between clinical psychology and psychiatry. Dr. T. R. Robie took full notes of the 3 lectures and has kindly submitted the subjoined report which consists almost entirely of his notes.

LECTURE I. What a Clinical Psychologist Is.—The clinical psychologist is a coalescence stemming from child psychology, social psychology, developmental, psychometric, and other elements as well as elements from psychiatry. Clinical psychology is today in the doldrums—this being partly the fault of psychologists themselves, but mostly the fault of psychiatrists for not telling us (psychologists) what questions they want answered.

The psychologist is trained in the experimental interview. His function is as diagnostician. As such, pediatricians and neurologists and other doctors are finding him increasingly useful. . . . As the psychologist has come more and more under the influence of dynamic orientation his interest in diagnosis has waned so that orderly, planned diagnosis seems superfluous. [Laughs from some flanking psychiatrists on rostrum, and many from audience!]

Is the psychiatrist right in delegating primary research to the psychologist, unless he also asks him to undertake psychotherapy? . . . I'm speaking very frankly. . . . The primary responsibility for psychotherapy is in the treatment of the ill, and this of course lies in the field of the medical man. . . . Whether a psychologist should or should not do psychotherapy is the burning question today. . . . You fellows put a gun at his head and say "you must do as we say." . . . Yet more and more, today psychiatrists are calling on psychologists to do psychotherapy. . . . But no psychologist wants to undertake the practice of medicine.

Is psychotherapy the practice of medicine? This question cannot be clearly answered. . . . In recent years psychiatrists have concerned themselves more and more with the 'normal' problems of mankind (the implica-

tion is left that this is in the psychologists sphere). . . . When marriage counseling, vocational adjustment, and certain other spheres are claimed as the specific province of psychiatry, we rightfully feel that psychiatrists are mulcting us of our province. . . .

How does one recognize a clinical psychologist? 'What is the difference between a psychologist and a psychiatrist?' is the question most frequently asked. . . . Well, you recognize a clinical psychologist by his training, accomplishments, and what he has for associations, i.e., his membership in national associations, whether he is a fellow or a member therein, and finally whether he is a Diplomate in Psychology.

For the future: Most of us would like to introduce some certification procedure in the various states. But we can never get this protection until you psychiatrists help us get it. We hope we'll be worthy of it when this becomes generally accepted.

(*Note:* There was no mention of training for psychologists in the basic sciences required for those who enter medicine as a discipline.)

LECTURE II. The History of Psychology with Physiological Orientation.—Science is the acceptance of what works, and the rejection of what doesn't. The most threatening attack on science in this century has come from Freud, despite what he contributed. Prince, Hoch, Putnam, Sidis, Meyer, and others popularized his theories. . . . We would have reached his concepts of infantile sexuality much slower through psychology. Freudianism was not a science.

I tend to place Freud and Darwin as using the same technic but Freud had no controls. . . . But his work was necessary before science entered the field. His error lay in his refusal to be complemented by other sciences.

After pointing out that it was a psychologist, G. Stanley Hall, who brought Freud to the U.S., and that the first published case treated analytically appeared in the *Journal of Abnormal Psychology*, Prof. Hunt added "Until recently Freudianism was taught only in courses in psychology."

LECTURE III. Dove of Peace.—These have been a bit different from any previous

Salmon Lectures. This was a sincere attempt to better a much needed communication between psychologists and psychiatrists. . . . Tonight's is by far the most practical lecture given in a long time. I think Dr. Salmon, were he alive, would approve it.

Today psychologists do diagnosis, a tremendous amount of research, and psychotherapy. . . . I want to talk about psychotherapy tonight, and about peace between psychologists and psychiatrists. . . .

I chafe at such words as "ancillary" and "adjunctive," though when you strip them of paranoid interpretations their meaning is innocent enough. . . . We complement the medical approach. The facts of history place us in a team and the sooner that is realized the better. . . . But when I hear it said that clinical psychologists aim at the annexation of the field of psychotherapy, and that their aim is the displacement of psychiatrists from their field of practice, and that the medical profession aims to displace psychologists from any independent practice in the science of human behavior. . . .

The vast majority of psychologists do not aspire to enter the independent private practice of psychotherapy. When private practice does occur it is rarely independent—it is usually collaborative. . . . The medical profession can intelligently supervise the practice of psychologists.

Collaboration: it would be in our code of ethics that a psychologist would operate in a setting with a psychiatrist or a pediatrician. . . . To be sure, some psychologists feel this is too much abrogation of freedom, but I think it would work and could be enforced. Around Chicago, it is our standard of practice.

Many of our attempts to get collaborative effort are not possible because of mutual

suspicions. Thus progress is interfered with by emotional factors. To suggest to psychologists any kind of regulation is equal to treason. . . . If my plan worked it would mean psychologists giving up the practice of psychotherapy, where they are now active independently.

Yet some psychologists cannot see psychiatrists as boss, under any circumstances.

I'd like to propose as a basis of beginning agreement, the statement of the A.M.A. Board of Trustees of last June, when they endorsed psychologists contributory work where medical control was in effect. . . . This proposal clearly limits the field of psychiatry to psychiatrists. It prevents diagnosis by psychologists in illness, except under medical responsibility, where the doctor takes the responsibility for the illness.

Medical supervision means the doctor is responsible, but this does not mean the doctor cannot delegate duties. Nor does it mean that the person delegated has the privilege to act without responsibility. The authority for such practice would stem from the psychiatrist.

Let me point out that the clinical psychologist's training prepares him for treatment of the mentally ill, and the public need is so great for professional services in this sphere that we should avail ourselves of this capacity psychologists possess.

Legal responsibility for the diagnosis of schizophrenia has to be coordinated whether or not it finally rests on medical heads.

This plan I propose can be made to work. However the legal policing of a few unscrupulous practitioners will be necessary.

(*Note:* The attendance at this year's series was the lowest on record, particularly at the 2nd and 3rd lectures. The above is a markedly condensed version.)

FEARS

What disturbs and alarms man are not the things, but his opinions and fancies about the things.

—EPICTETUS

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PSYCHIATRY AND NEUROLOGY

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Since in the normal condition of the world there will be a margin of every population on the verge of starvation, it seems likely that there will have to be a revision of the doctrine of the sanctity of the individual human life. . . . One of the justified boasts of recent times has been the great decrease that medicine has made in infant mortality. . . . But the difficulty in the world is going to be that the number of people born is too great for the food supplies, so that a fraction must die anyhow; may it not be better that they should die in infancy? The truth is that all our present codes about the sanctity of human life are based on the security of life as it is at present, and once that is gone they will inevitably be revised, and the revision will probably shock most of our present opinions.

—SIR CHARLES DARWIN,
The Next Million Years

COMMENTS

EXPERIMENTAL PSYCHIATRY

Experimental psychiatry has made some progress in the last few years. In the following we would like to summarize some of the work done in the field of the experimentally-produced psychoses.

Different drugs like mescaline, d-LSD₂₅, and others have been used for some time in producing abnormal mental states in normal individuals and also to investigate the already-existing abnormal mental states in persons suffering from a functional psychosis. These drugs are of great importance because the symptoms produced in normal individuals are strikingly similar to many symptoms of schizophrenia. The effects of the drug can be studied in a state of clear consciousness while the person remains in contact with the examiner and is able to describe in detail the manifold mental changes during drug intoxication. We know very little how a drug produces mental changes—the absorption, excretion, and the chemical action on the nervous system are in most respects still obscure. Nevertheless some progress has been made and most likely more will occur in understanding the biochemical and neurophysiological changes produced by these drugs. Then many of the mental changes which at present have been studied mostly on a clinical level will be better understood on an etiological level. The aim is to create a model psychotic state with one of these compounds and to study the biochemical, neurophysiological, and psychodynamic manifestations simultaneously.

Recent investigations by Osmond and Smythies indicated a similarity of the molecular structure of mescaline and adrenaline. Hoffer, Osmond, and Smythies investigated a metabolite of adrenalin, adrenochrome, and reported they were able to produce psychoses with adrenochrome which are similar to those produced with mescaline. Rinkel, Hyde, and Solomon were not able to confirm these findings, but feel that another metabolite of adrenalin, adrenoxine, is perhaps the active agent in producing a psychosis. Rinkel *et al.*

feel that a natural error in the adrenalin cycle is an important factor, if not the only one, in the origin of this experimental psychosis. Of course, all this work will have to be augmented further before we know more definitely what biochemical mechanisms are involved in the production of these experimental psychoses. Most important is that constant experimentation is going on in this field which will probably yield more in the future than simple clinical descriptions or theoretical constructions concerning the origin of the psychoses. It is possible that the schizophrenic-like symptoms produced by mescaline or d-LSD₂₅ are not the same as schizophrenia which occurs spontaneously. Nevertheless, many of the mechanisms are so similar that if we have a better understanding of the experimentally-produced abnormal mental states our knowledge of schizophrenia itself would be greatly enhanced.

In the following I would like to summarize some of the work done at the New York State Psychiatric Institute outlining some of the actions of mescaline and d-LSD₂₅. Both these drugs markedly influence the vegetative nervous system and in addition produce symptoms which resemble schizophrenia. It is of interest that alterations in perception, in bodily sensations, in changes in body image are concomitant with the production of anxiety. The presence of this intense anxiety then leads to a lowering of reality control and to depressive, aggressive, and paranoid manifestations. It is unclear whether the emotional alterations seen under the influence of these drugs are due to the physiological action of the drug alone or partly due to psychological changes such as impaired reality control, alteration of sensory perception, or alteration in affect. It is of great interest that due to the intoxication by these drugs the physical and emotional homeostasis is altered. This leads to an impaired ego integration which in turn fosters fragmentative mental processes.

Mescaline and d-LSD₂₅ are drugs which disorganize the psychic integration of a person. This disorganization is much more apparent in schizophrenics and latent schizophrenics than in normal subjects. In schizophrenics and latent schizophrenics the drug is able to heighten the schizophrenic disorganization of the individual both emotionally and conceptually and is therefore very valuable for the study of schizophrenic structures.

It is possible to demonstrate that mescaline and d-LSD₂₅ is responded to differently by acute schizophrenics and well-preserved schizophrenics in contrast to deteriorated schizophrenic patients. While the above patients respond with great intensity to these drugs which reinforce and underscore their symptomatology most of the deteriorated schizophrenics show very little response to the drug especially as far as the reinforcing effect of it is concerned on the mental symptomatology. It is also possible to show that the basic structure of the neurosis and psychosis after psychiatric treatments, and especially after psychosurgery, remain the same. This was particularly impressive in relation to anxiety in the pseudoneurotic group of schizophrenics where after operation the drug was able to reactivate anxiety, obsessiveness, and other symptoms in the same context in which they occurred before the operation. In overt schizophrenic patients the psychoses was also reactivated indicating that qualitatively the patient remains the same. However, a difference was noted in the intensity of symptoms under these drugs before and after operation. The severity of response in improved patients was less than prior to the operation indicating that we are dealing in psychosurgery with a procedure that reduces the emotional symptoms quantitatively, but does not alter the qualitative structure to any great extent. At present there is not sufficient data to warrant the use of mescaline or d-LSD₂₅ for reliable differential diagnoses. The available data suggest that in latent schizophrenic subjects the drug is able to precipitate overt schizophrenic reactions for a short period while they are under the toxic influence of the drug. The use of these two compounds in therapy is still under investigation and its value for this purpose is not fully assessed. Further inves-

tigations will be necessary to clarify the controversial statements in the literature on the value of mescaline and d-LSD₂₅ as therapeutic agents.

From a research point of view it is as important to have methods to abolish an artificially-produced abnormal mental state as it is to create it. Therapeutic methods in dealing with mescaline or d-LSD₂₅ psychoses are of practical and theoretical significance. We have tried to influence the mescaline or d-LSD₂₅ intoxication with different methods. The mescaline intoxication is affected little by suggestion or persuasion. To some extent reassurance allays the patient's anxiety, but has only a very temporary effect. Hypnosis was tried, but was very difficult. It does not usually influence the patient's clinical picture and this is especially so in the hallucinations. The patient is usually so dominated by his experiences that he doesn't respond to hypnosis. Electroshock treatments were also tried on patients while under mescaline intoxication, but this did not influence the clinical symptoms. The patients continued to behave in the same way as they did prior to its application. Of course we are dealing here with the influence of one or two electroshock treatments on mescaline intoxication which lasts 6 or 7 hours. But electroshock given at the height of mescaline psychosis does not interrupt its action. Today we have several methods of influencing mescaline and d-LSD₂₅ effects on the nervous system. Sodium succinate was used by some and glutamic acid by others. Both have some influence on these drug intoxications, but the results were not as clear cut with them as with the drugs I will mention in the following. Sodium amytal or pervitin (desoxyn) will neutralize the effects of mescaline and d-LSD₂₅. Amytal appears to dampen the stress reactions, tension, anxiety, and autonomic features. It sedates, euphorizes, and blunts the impact of mescaline and d-LSD₂₅. Pervitin appears to be more effective in regulating the perceptual changes, time, space, and body image being most clearly affected. The neutralizing effect of pervitin is shorter than that of amytal. Amytal and pervitin given together are more effective than with one alone in the majority of cases.

When a patient under d-LSD₂₅ is given

amytal and pervitin the first change which appears in the psychosis is an increase in contact, a brightening of his expression and so-to-say a "return" to the surroundings. This can be variously described as an improvement in contact, in reality testing, reduction of autism, or a more appropriate affect. The patients often describe this as being "more here." Coincidentally, or soon afterward, the distortions of space, time, and body image begin to disappear, the visual hallucinations start to fade. All this occurs within a few minutes. The patient also experiences relief from tension and anxiety, and a better motor control. Common content features and particularly the paranoid ones also begin to fade. Of course in many patients the individual psychopathology which was outlined by the drug begins to return to the usual baseline. In some patients the perceptual alterations are not entirely eliminated. However, the patient is no longer disturbed by these phenomena. Clinically, in behavior such patients resemble those who have undergone psychosurgery. In such cases the obsessive, phobic, and other clinical manifestations sometimes continue, but the patient is not dominated by them and does not respond with the same intensity as before. Neutralization of autonomic phenomena is also quite rapid—vomiting, sweating, and tremor clear up quickly. The sequence of events is not fully systematic and sometimes one and sometimes another of the above-described changes occurs first. We also tried to see if the application of sodium amytal or pervitin, or the two drugs together, is able to prevent the development of a mescaline or d-LSD₂₅ psychosis if given sometime prior to the application of amytal and pervitin. In the majority of patients amytal and pervitin are only able to delay the occurrence of the psychosis.

Rauwolfia preparation was also used to counteract mescaline and d-LSD₂₅ psychoses. These experiments are not finished, but the impression up to today is that Rauwolfia is not as effective as sodium amytal and desoxyn. We recently experimented with thorazine. This compound was also given to relieve mescaline and d-LSD₂₅ psychoses. Thorazine was given at the height of mescaline or d-LSD₂₅ effect, usually an hour or an hour and a half after the initial drug was ad-

ministered. It was possible to eliminate in a clear-cut way the mental changes which were produced by mescaline. Hallucinations, feelings of depersonalization, somatic delusions were especially well controlled by thorazine, and anxiety, tension, and vegetative disturbances were also well controlled. In some patients pronounced results were produced in 3 to 7 minutes with 25 or 60 mgm. of thorazine applied intravenously. In some patients when 25 mgm. was injected intravenously a moderate to marked improvement took place initially lasting from 5 to 20 minutes. Then, however, all the original symptoms produced by the mescaline returned in full intensity. This relapse was then quickly and permanently reversed by a second injection of the chlorpromazine. Similar observations were made with d-LSD₂₅. The pattern of improvement with thorazine has many interesting details. Here we will mention only that usually anxiety and tension are relieved first and are then followed by a reduction and elimination of the more complex mental manifestations like hallucinations, delusions, and obsessive ruminative states. If the anxiety is not controlled the other manifestations continue. Nausea, vomiting, and marked motor restlessness is also relieved very quickly with the intravenous application of thorazine. No conclusions should be drawn about the effectiveness of thorazine in the experimentally-produced psychoses in respect to its efficacy in a genuine case of schizophrenia.

We also tried to find out how far thorazine prevents the development of mescaline and d-LSD₂₅ psychoses. We injected intravenously a few patients with mescaline who were on thorazine treatment and receiving up to 500 mgm. daily for a few weeks. This phase of the research is not yet completed, but the impression is that patients who are on thorazine have much weaker reactions to d-LSD₂₅ than individuals who have had no thorazine. It should be noted that alterations of the autonomic nervous system did not occur in these cases as is usually seen with d-LSD₂₅. With mescaline, vegetative manifestations occurred, but no psychotic changes were produced if the patient was on thorazine. Because the case material in this series is small, further investigations will have to be made to confirm these findings.

Electroencephalographic studies are of interest in this connection. In those cases in which the electroencephalogram shows increased activity and irregularity under mescaline, the administration of chlorpromazine or some of the other counteracting drugs produces a clinical decrease in anxiety and allows the return of the pre-mescaline predominance of alpha rhythms. When large doses of the drug were given, for instance 40 mgm. of chlorpromazine intravenously, within 3 minutes clinically the patient appears very drowsy and the EEG record shows the picture of drowsiness produced by other means. It is possible that chlorpromazine acts by depressing the "reticular facilitatory" region of the brain stem up to and including the diencephalon and most of the mesencephalon represented by the intralaminar and other nuclei of the thalamus called by Jasper "the thalamic reticular system."

Studies with the psychogalvanometer have shown that if the subject's emotional tension is reduced the average body electrical resistance increases steadily. In most cases studied, if there was a sufficient amount of

chlorpromazine or other drug administered to markedly decrease the clinical state of anxiety and tension, there was a pronounced increase in the body's electrical resistance. These observations could again be brought in in relationship to the suppressor portions of the reticular substance. The other vegetative alterations like amelioration of nausea and vomiting and the changes in blood pressure could be tied in with the mesencephalic and diencephalic action of the drug. With large doses of chlorpromazine it is possible to produce a Parkinsonian syndrome consisting of muscular rigidity, mask-like features, loss of associated movements, salivation, etc., indicating an influence on the paliostriatum.

It is possible that further investigations of the neurophysiological alterations produced by the above-mentioned compounds will further our knowledge of changes of vegetative regulation which is intimately linked with regulation of emotions and moods which in turn again lead to complex psychic manifestations.

P. H. H.

ECHOES OF THE FIFTH MENTAL HYGIENE CONGRESS

Following the Fifth International Congress on Mental Health, several delegates from countries abroad were asked for their impressions—not reviews of the proceedings, but rather general evaluations or suggestions. Replies were received from Dr. W. S. Maclay of the Ministry of Health, London; Dr. Carlo de Sanctis, Vice-Director of the mental hospital, S. Maria della Pieta, Rome, Italy; and Dr. Syuzo Naka of Kyushu University, Japan.

All were enthusiastic about the organization of the Congress and the hospitality of the Toronto members. As Dr. Maclay put it, "Toronto could with truth have adopted as its motto for the Congress the inscription over the North gate of Siena, 'More than her gates, Siena opens her heart to you.'" There were several comments on the "frustrating inability to attend more than a fraction of the numerous meetings on subjects of interest." Dr. Maclay felt that "the risk of confusion and mental indigestion was con-

siderable." And he added that a short post-graduate course might be desirable on "How to be a dutiful congress attender and yet get benefit and pleasure from it."

Dr. de Sanctis recalls that the Toronto Congress was the third of its kind since World War II and was not less successful than the two previous Congresses held in London in 1948 and in Mexico City in 1951. Dr. de Sanctis emphasized the value of the plenary sessions held in the afternoon when "all members of the Congress were able to hear speakers of great repute who dealt with general subjects of very wide scope, sometimes even touching on philosophy and ethics." Without these general sessions, members would naturally have gravitated to the smaller group discussions dealing with their own special interests and there would have been the danger of missing the broader issues of "Mental Health in Public Affairs," which was the theme of the Congress.

Dr. de Sanctis commented, "Whether we wish to consider mental hygiene in terms of public health or, as the Russian delegation suggests, in terms of Pavlovian physiology, the most immediate experience drawn from these world assemblies is the realization that ideals are the most powerful forces behind actions and that the real strength of the mental health movement lies essentially in the spiritual impetus of its individual members, who, though of different races, cultures, and professions, are moved by the sufferings of humanity, and drawn together in their desire to find again a common feeling of brotherhood. . . . The Toronto Congress has shown that mental hygiene has now found its place in the field of action of public health and that the principles of mental health may now be applied to every branch of health, welfare, education, and work.

"It is obvious that mental hygiene, considered in its widest sense, cannot be the monopoly of one single science, and multi-professional collaboration is the essential requirement for the thorough study of a given problem. From this point of view also the Congress was a wonderful training ground."

Prof. Naka makes the comment that "Papers read were rather literary and philosophical. We need more emphasis on scientific basic researches on every aspect of the mental health field." He also expressed surprise that "those who wished to attend the voluntary research group were so few." One criticism was that "visual aids were so little utilized. When they were used, the projection was poor and the figures projected were almost invisible." Prof. Naka would like to see more emphasis on the physical and physiological basis of mental health and illness. As he puts it, "the basis of mental activity is the brain, autonomous nervous system, and hormones. Mental development is based upon the development of the brain." He wondered why discussion along these lines was not prominent during the Congress. He felt that the general theme of the Congress, "Mental Health in Public

Affairs," was very timely and appropriate and that the additional meetings dealing with child psychiatry and group psychotherapy were unusually successful, and he was convinced that all were "deeply impressed with the importance of mental health in every area of social affairs." He felt that such meetings as this Congress should make a real contribution to international friendship and world peace. "International courtesy was highly held during the Congress."

There were other interesting opinions and comments from each of the correspondents, but we may close this all-too-brief summary with a statement by Dr. Maclay:

"'Mental health' or 'mental hygiene,' or 'preventive psychiatry,' call it what you will, is a subject which always arouses strong feelings. Someone has written that one of the problems of our generation is to make benevolence scientific. The benevolent are protective of the human dignities involved in their highly personal relationships while the scientific are pained by the hit or miss methods, lazy phraseology, and lack of clear concepts of the benevolent. Each thinks that the head or heart too completely dominates the work of the other. Perhaps one of the most valuable results of the Congress has been to give to each a clearer vision of their own deficiencies and a better understanding of the virtues of the other. The mental hygienists began to realize that most of their activities were benevolent rather than scientific, and that the concept of mental health has many aspects which must be more closely defined if there is ever to be a satisfactory assessment of the value of the effort and money being expended on them. The scientists began to realize that there is justification for trying to achieve benevolent aims even though the aetiology of the condition aimed at may not be fully known and the methods used be inspired by emotion rather than exact knowledge. Sir Geoffrey Vickers made a valuable contribution to this mutual understanding at the first plenary session in his address on 'Mental Health and Spiritual Values.'"

NEWS AND NOTES

LEO KANNER HONORED.—On Thursday evening, February 24, 1955, at the Sheraton Belvedere Hotel in Baltimore, a testimonial dinner in honor of the twenty-fifth anniversary of the establishment of the Children's Psychiatric Service of the Harriet Lane Home of the Johns Hopkins Hospital was given to Dr. Leo Kanner, Associate Professor of Psychiatry and Associate Professor of Pediatrics, by his professional colleagues in the departments of psychiatry and pediatrics. The following day, Friday, February 25, a special program was presented jointly by the departments of pediatrics and psychiatry as part of the Johns Hopkins medical and surgical meetings which were being held at that time. The papers on the special program were: "Early Infantile Autism: 1943-1955," by Dr. Leon Eisenberg; "Fat Children Grown Up," by Dr. Hilde Bruch; "The Syndrome of Gonadal Agenesis and Male Chromosomal Pattern in Girls and Women: Psychological Studies," by Dr. John L. Hampson; "The Activity-Passivity Pattern and its Influence on Personality Structure," by Dr. Eleanor Pavenstedt; "The Father of the Schizophrenic Patient," by Dr. Theodore Lidz; and "Twenty-One Years in the History of a 'Cured' Schizophrenic Illness."

The pre-eminence of Dr. Kanner as a pioneer in child psychiatry is well known, and through his instrumentality the Children's Psychiatric Service of the Harriet Lane Home was the first psychiatric clinic for children established in conjunction with a pediatric service.

MENTAL HEALTH FUND CAMPAIGN.—A nation-wide campaign to raise \$5,000,000 to fight mental illness is being launched during Mental Health Week by the National Association for Mental Health and its affiliated state and local associations. The National Association for Mental Health is the only national citizens' organization devoting itself exclusively to the fight against mental illness. The campaign will continue through the month of May, and in some areas until early autumn.

Contributions will help support urgently needed research projects, train personnel, establish community clinics, and educate the public on the prevention of mental illness. They will also support the campaign for better mental hospitals. All but a small percentage of the funds remain in the states and communities.

The N.A.M.H. is an entirely voluntary, non-profit organization, which depends on contributions from individuals, business and industrial concerns, and foundations. Support given to a similar campaign last year greatly helped to advance the fight against mental illness, and the Association and its state and local affiliates appreciate the cooperation that was given. It is hoped that this year's campaign will be equally successful.

Contributions may be sent to the N.A.M.H., 1720 Broadway, New York City 19, New York.

DR. CARLSON HONORARY PRESIDENT OF NATIONAL SOCIETY FOR MEDICAL RESEARCH.

—At the annual meeting of the Society in Chicago, February 6, 1955, Dr. Anton J. Carlson, the eminent physiologist of the University of Chicago, was unanimously elected Honorary President for Life of the National Society for Medical Research.

Dr. Carlson is one of the few surgeons to be a member of the National Academy of Sciences, and the position to which he has been appointed is a new and unique honorary one.

Dr. Ralph Gerard, director of research at Illinois Neuropsychiatric Institute, continues as secretary-treasurer.

THE AMERICAN INSTITUTE OF DENTAL MEDICINE.—The annual meeting of the Institute will be held at the Desert Inn, Palm Springs, California, October 23-27, 1955.

There will be seminar lectures and round-table forums. Among the speakers, Dr. Hans Selye, University of Montreal, will report on the problems of stress as applied to dental medicine.

For further information, apply to the executive secretary, Miss Marion G. Lewis, 2240 Channing Way, Berkeley 4, California.

SEVENTH ANNUAL INSTITUTE IN PSYCHIATRY AND NEUROLOGY.—This annual institute was held February 24-25, 1955, at the Veterans Administration Hospital, North Little Rock, Arkansas. Dr. Erwin S. Chappell served as general moderator of the 4 scientific sessions, held one each morning and afternoon of the 2-day conference.

FIFTH ANNUAL INSTITUTE IN PSYCHIATRY AND NEUROLOGY.—This Institute sponsored by the Veterans Administration Hospital, Lyons, N. J., the New Jersey Neuropsychiatric Association, and the New Jersey District Branch of the A.P.A., will be held Wednesday, April 13, 1955, at the Veterans Administration Hospital, Lyons, New Jersey.

The scientific program includes: "The Role of the Psychiatric Social Worker in Psychiatric Treatment," by Dr. Viola Bernard; "Direct Analysis in the Therapy of Psychoses," by Dr. John N. Rosen; "Shock Therapy vs. Psychotherapy in Psychosis," by Dr. T. R. Robie; "The Relationship of Psychoanalysis to Psychiatry and Neurology," by Dr. M. Ralph Kaufman; "What is The American Psychiatric Association," by Dr. R. Finley Gayle, Jr.; and "A Critique of Psychosomatics," by Dr. Morris Herman.

Dinner will be served at 7:00 p.m., after which Dr. Francis J. Braceland will speak on "Psychiatry in the History of Literature."

The registration fee of one dollar will include a copy of the Proceedings. Military and Veterans Administration personnel are exempt. Additional information may be obtained from Dr. Crawford N. Baganz, Manager, Veterans Administration Hospital, Lyons, N. J.

CONGRÈS DES MÉDINS ALIÉNISTES ET NEUROLOGISTES DE FRANCE ET DES PAYS DE LANGUE FRANÇAISE.—This Congress will hold its fifty-third session at Nice, France, September 5-11, 1955.

In the section on psychiatry, Dr. Col. Hamon, professor, Val de Grâce, will speak on *Les Psychoses Collectives*; in the section on neurology, Dr. Boudin of the faculty of medicine, University of Paris, will report on *La Fin de la Syphilis Nerveuse*; in the section on forensic medicine, Dr. Deshaies, Maison Nationale de Saint-Maurice, will speak on *L'aveu*.

For further information write the secretary-general of the Congress, Dr. Paul Cossa, 29, Boulevard Victor-Hugo, Nice, France.

POSTGRADUATE CURRICULUM IN RELIGION.—Boston State Hospital is presenting, February 2 through May 25, each Wednesday from 1:30 to 2:30 p.m., a postgraduate curriculum in religion for psychiatrists and allied personnel. The subjects, which include such topics as "Oriental Religions," "Sociological Studies in Religion," etc., will be presented by faculty members from graduate schools in Boston.

INSTITUTE OF GENERAL SEMANTICS.—This Institute announces a special intensive seminar to be held the week of July 22-30, 1955, at Bard College, Annandale-on-Hudson, New York. The twelfth annual seminar-workshop and a special mathematics workshop will be held August 13-28, also at Bard College.

The Alfred Korzybski Memorial Lecture will be delivered by Buckminster Fuller in New York City, April 22.

For further information write the Institute of General Semantics, Lakeville, Connecticut.

DR. LEMKAU ACCEPTS NEW YORK POST. Dr. Thomas A. C. Rennie, chairman of the recently constituted New York City Mental Health Board, has announced the appointment of Dr. Paul V. Lemkau, professor of public health administration at John Hopkins University School of Hygiene and Public Health, as director of mental health service for the New York Board, effective March 1.

The function of the Mental Health Board is to coordinate the city's public and voluntary health facilities and to allot funds as necessary to aid these agencies.

BOOK REVIEWS

LA PSYCHIATRIE SUISSE. By *Henri F. Ellenberger, M.D.* (Paris: L'Evolution Psychiatrique, 1954.)

It is easy to remember, after reading this book, that Auguste Forel was not only the father of Swiss psychiatry, but a lifelong student of ants. For, as Dr. Ellenberger's account develops, the most striking traits in Swiss psychiatry are enormous industry, passion for detailed data gained from acute observation of patients, ability to synthesize vast quantities of information to yield original hypotheses, high professional conscience, and a strong sense of social duty.

These characteristics appear in the book itself, a lucid and rewarding monograph on the history, trends and achievements, and relations with other disciplines of Swiss psychiatry since its tardy beginnings under German tutelage in the mid-nineteenth century. In addition, the section on the daily life of a typical psychiatrist working in a cantonal asylum will convince most readers that the American psychiatrist is a man of leisure.

Originally appearing as a series of articles in *L'Evolution Psychiatrique* from 1951 through 1953, this 129-page volume lists some 600 references, of which there are about 400 in German, 100-odd in French, and a half dozen in English. Many of the titles are intriguing, and it is regrettable that so little of this literature is available in translation. The author mentions in his summary of the strong and weak points of Swiss psychiatry the paucity of psychiatric journals, the delays in publication, and the great expense (to the author) of book publication. Also there is little prestige in research and funds therefor are scarce, even should the badly overworked asylum psychiatrist find time and energy for such work. The excellent hospital records, organized by the highly competent medical secretaries available in most Swiss asylums, are augmented by, exchanged, and correlated with, other records kept by school, civil, judiciary, and other bodies. It is thus often possible to trace accurately for 5 generations a family history, a circumstance ideal for genetic research, and helping to account for two remarkable schools of thought in Swiss psychiatry: the *Erbpsychiatrie* (genetic psychiatry) and the *Schicksalsanalyse* (analysis of destiny) of the Hungarian, Szondi. Bleuler's work on the "analysis of heredity" and on endocrine factors modifying hereditary psychoses is described briefly, and the conclusions have an almost Calvinistic stringency in their minimizing of psychogenic factors and of somatic therapies. Insulin and metrazol, for instance, "can accelerate spontaneous cures and afford subjective and symptomatic amelioration in other cases."

As for Szondi, it is perhaps somewhat premature to characterize his work as "ceding nothing in originality or importance to the psychoanalysis of

Freud," especially since *Schicksalsanalyse* is elsewhere described as a fusion of genetic psychiatry and psychoanalysis. "The notion of destiny occupies with Szondi exactly the same place as that of the dream with Freud," and the former seeks a direct route to the biologic substratum of personality, the "familial unconscious," by means of psychoanalysis and deep biologic analysis of hereditary factors. The latter are investigated through exhaustive genealogies, with emphasis on the determination of "possible destinies," e.g., choice of mate by mutual attraction of individuals of analogous genotype. The possible goal is an all-inclusive "Linnaeus" of personality types, each genotype having a number of possible destinies. The Szondi test, or "drive diagnosis," likened to radar for its prognostic quality, was devised to explore "that region so difficult of access, the familial unconscious, of the genotypic structure whence emanate the unconscious options which constitute our destiny."

In this school, as in much of Swiss psychiatry, may not the admirable emphasis on historical fact blend with a mildly fatalistic attitude toward heredity at times obscuring the importance of the subjective, fantasied fact? This criticism surely does not apply to Ludwig Binswanger's *Daseinsanalyse*, existential analysis, which has nothing to do with the system of Sartre. It is the "analysis of states of awareness by means of a system of phenomenological coordinates," and aims to explore the existential modalities of a patient with regard to his self in various roles, the way he moves in the world, and his horizon, perspective or "opening on the world," including his experiencing of time, space, continuity, causality, light, color, matter, etc. Close attention is paid to the patient's figures of speech as indices of his changing modes of awareness, and one can see how absorbing this approach could be, especially as applied to psychosis.

Less novel, but informative, is the section on psychoanalysis. Here the Adlerian school is treated very briefly, but credit is given for its value in social analysis, animal psychology, and the study of the child and adolescent.

Jung comes off more handsomely in that his life, development, and a few outstanding elements of his system are described, but the author ranks Forel, E. Bleuler, and Hermann Rorschach as the pioneers of Swiss psychiatry. Jung's influence appears "feeble" with official psychiatry and psychoanalysis, is stronger abroad than at home, and especially potent among theologians, psychologists, historians of religion, and ethnologists. Acerb comments are made concerning the atmosphere of the "theosophic cult" at the Jung Institute, but the Master's magic personality and sparkling intellect are given full credit. An excellent summary of differences between Freudian and Jungian concepts

of libido, the unconscious, psychic structure, neurosis, and treatment, is given.

Despite brilliant beginnings in the psychoanalytic movement, Switzerland has no psychoanalytic periodical, which helps account for our relative ignorance of a large and valuable body of Swiss contributions. The author brings us up to date with a running account of early and present-day analysts, their location and works. Especially notable were the remarks on Oscar Pfister and Hans Zulliger (lay analysts are important contributors in Swiss psychoanalysis), Meng, Kielholz, Boss, and Sechey-haye.

Ethologists may seek out Brun's article on collision of instincts in ants, and an apparently serious study of an ant with brain tumor.

Students of legal psychiatry can gain much, it seems, from the Swiss "experts" or expert consultations rendered to courts of law on judge's order. In quality, scope, and quantity they are unexcelled, and an important part of the Swiss cantonal psychiatrists' contribution to society; they are based on prolonged observation of patients.

In conclusion, the author remarks "the astonishing development of Swiss psychiatry and psychology is the expression of a cultural mutation, which may be called the 'Psychological Revolution.'" His account of this phenomenon, far more inclusive than is here indicated, is an antidote to insularity. It should be translated and read.

STONEWALL STICKNEY, M. D.,
Western Psychiatric Institute,
Pittsburgh, Pa.

ENDOCRINOLÓGISCHE PSYCHIATRIE. By M. Bleuler.
(Stuttgart: Georg Thieme, 1954. Price: DM
46.50.)

The author, trained in internal medicine and psychiatry in Switzerland and in an additional 2-year residency in neurology and psychiatry in the U. S., has been for many years one of the recognized leaders of continental psychiatry. Under his leadership a considerable number of clinical publications dealing with endocrinologic aspects in psychiatry have appeared from the Burghoelzli Clinic. In 1950 Professor Bleuler spent a year as a guest in the departments of psychiatry and endocrinology of The New York Hospital-Cornell Medical Center, applying his clinical investigations to a somewhat different group of patients, thus supplementing his Swiss findings. His *Endocrinologische Psychiatrie* presents his experiences and the findings of the world literature (including 2,717 publications), forming the basis for a new type of psychology and psychopathology.

His description of psychologic and psychopathologic symptoms occurring with endocrinologic findings, their relationship to each other, and the influence of endocrine function on the personality are carefully presented. The author holds closely to his facts and is therefore critical of the many far-reaching claims in the literature. The application of his observations and conclusions to treatment reveal an outstanding clinical knowledge.

It is emphasized that no specific psychopathologic symptoms are observed in endocrinologic disorders although special psychopathologic reactions may be observed in some conditions (e.g., in hyper- and hypothyroidism). In severe and protracted endocrinologic disorders, diffuse brain damage may occur and be accompanied by the amnestic syndrome in adults and by oligophrenic developments if the damage occurs in infancy. Frequent are mild psychopathologic symptoms, including lability of mood, increase or decrease of drives, and impulsiveness. They result in pictures of infantilism or of apparent senile changes. The endocrinologic psychosyndrome which he describes resembles psychopathic manifestations but the condition is not identical with psychopathic personalities. Full-fledged psychoneuroses occur rarely. The theory of Selye and the application of the concept of stress to psychopathology are reviewed as well as Diethelm's attempts to determine well-defined separate emotions and related hormonal substances. The author's contributions are in the field of personality studies with attention to mild endocrinologic symptoms. From such a point of view he reviews in the second part of the book the psychopathologic findings of endocrine disorders. In this large group there deserve to be singled out his studies of acromegaly, of Cushing's, of Addison's disease, of sexual disorders, of thyroid and parathyroid disturbances, of diabetes and hyperinsulinism, and of over- and underweight. Of special interest are his endocrinologic findings in schizophrenia, psychopathic personalities, alcoholism, and homosexuality.

The book presents the available knowledge of psychopathologic symptoms and endocrinologic disorders, based on literature and the author's studies. It offers data which are little known to the clinician and highly stimulating and challenging to the investigator. To both, it is a most valuable and clearly written book of information.

OSKAR DIETHELM, M. D.,
New York City.

THE STRUCTURE OF HUMAN PERSONALITY. By H. J. Eysenck. (New York: John Wiley, 1953. Price: \$5.75.)

In *The Structure of Human Personality*, Eysenck, the great Maudsley psychologist, continues his courageous rear guard action in defense of scientific psychology. Probably not many psychiatrists will read through this formidable work which a future generation may well look upon as a classic. For factor analysis is made of stern stuff. A complete understanding of it requires a ready facility with higher mathematics. Factor analysis has been described as a method of discovering "the smallest number of independent factors or variables which will be adequate for the description and classification of traits of mind and personality" (MacKinnon). It tries to achieve in the realm of personality the same sort of results so brilliantly achieved in intelligence testing. Ultimately perhaps, it is a mathematical groping for the fundamental organs of the mind—functionally, not anatomically speaking.

Factor analysis has been bitterly criticized. The factors themselves have been called by some, statistical fictions, by others, mathematical artifacts. Despite such criticism, the clinician will discover an exciting correspondence to diagnostic concepts. This reviewer, in particular, was struck by the close correspondence between Cattell's factors (p. 63) and the various subgroups of *The Personality Trait and Personality Pattern Disturbances* in the new A. P. A. classification. Other factors lead to very interesting nosological speculation.

Eysenck's coverage of his specialty is extraordinarily complete, and nothing important is left out. His book thus covers his own not insignificant contribution to factor analysis, so that like Caesar, we find Eysenck commenting on Eysenck, always with the winning simplicity of the truly great mind.

This book stresses the fact that nothing worthwhile can come out of the hopper of factor analysis unless meaningful material is fed into it—material that tests real hypotheses and which proceeds from a clear idea of what the researcher is looking for.

If the method of factor analysis is correct, it is unfortunate that the chronic split between clinic and university campus has thus far prevented it from putting its teeth into important clinical material, material which will throw some light on the schizophrenia problem. Why not feed into the matrices such things as degrees of projection of hallucinations, basal lead E.E.G. peculiarities, steroid metabolism, autokinetic phenomena and similar "hot" material. Eysenck himself has correctly stressed the importance of cross validation and of correlating psychological with physiological variables not based on subjective interpretation.

Eysenck has a hatred of humbug. For wooziness in thinking, he has nothing but scorn, the acidulous and at times testy scorn of the pure scientist. Thus of his critics he can say, ". . . let us follow psychoanalytic practice and lay it down that criticism of factor analysis should be confined to those who have themselves been factor analysed." It is exciting—and at times a little uncomfortable to watch what he does with the "holistic," or "organismic" approach (Harvard's "Assessment of Men," p. 80), Sheldon's typology (p. 71), and Murray's famous missing chapter on the intercorrelation of variables (p. 73).

The Structure of Human Personality is a work of utter integrity. Insofar as such stubborn material permits, it is an exciting book. Continuously we are in the presence of a taut mind; brilliant, courageous, and ruthlessly scientific.

HIRAM K. JOHNSON, M. D.,
Orangeburg, N. Y.

UNIVERSITY EDUCATION FOR ADMINISTRATION IN HOSPITALS. A Report of the Commission on University Education in Hospital Administration, 1954. (New York: The American Council on Education, 1954. Price: \$3.00.)

The 13 university graduate programs in hospital administration established the Commission on University Education in Hospital Administration to

evaluate their courses. The W. K. Kellogg Foundation, financially interested in these programs, financed this independent commission in the 18-month study on which this report is based. Intended to be representative of all interested groups, the commission consists of 9 active members of whom two are hospital trustees, two hospital administrators, one a graduate of an existing university program who has had significant administrative experience in the field of public health, one a representative of organized education on a national scale, and 3 professional educators in the field as well as hospital administrators and consultants. The report is intended to indicate the needs of the hospital field and the limitations of the existing programs and to recommend improvements in organization, curriculum, and educational methods. The medical administrator vs. business manager debate is not considered by the commission, but, if one accepts its statement that only generalized superficial knowledge of medicine is required of a hospital manager, this book is a valuable and apparently valid addition to the literature on education of hospital administrators.

The commission reports that in 1943, 40% of hospital chief administrators were doctors, 34% nurses, and 26% persons of other backgrounds. In 1952, these figures had changed to 33% doctors, 29% nurses, and 39% persons of other backgrounds. In connection with these figures, it is noteworthy that 12 of the 13 degree-granting programs in hospital administration are phenomena of the last 10 years, though the commission indicates that the apparent rise of business managers to plurality in the hospital field is not valid for tuberculosis hospitals, federal hospitals, or neuropsychiatric hospitals. There is no elaboration of this anomaly. On page 51 it is stated that, "Perhaps the most crucial of all skills in every phase of modern life is the ability to work effectively with other people. Administrative policy is made and carried out by individuals working as parts of groups. Unless a person has a valid understanding of human nature and of the importance of individual motivation and group relationships, he will not be successful in formulating and executing policies." One can only hope that in the not too distant future this commission or another one formed by the Association of University Programs in Hospital Administration will study and report on the relative advantages of business and medical administrators for hospitals.

The program recommended by the commission is divided into 3 parts. First is a preparatory preprofessional academic course which apparently approximates an undergraduate major in business, though as planned it could be a 9-month graduate course. Second is the 2-year course planned actually to be offered by the schools concerned. The first year is an academic program equivalent to a graduate course in business administration plus courses in the problem of disease, the health professions, and social organization for public health. The second year is one of supervised residency. The third division of the recommended program is an in-service training period consisting of 3 to 5 years of on-the-job training plus attendance at hospital

institutes, regional conferences, and meetings of hospital associations. This third period would be the responsibility of the individual graduate, though the university should offer guidance and assistance.

In line with the recommended emphasis on business and administration, the commission suggests that the programs be switched in affiliation from public health to business administration schools. Since most business school graduates are unaware of the hospital administration field, more effective publicity is advised. The resultant expansion will require more, fully qualified instructors in order to keep the classes to seminar size. A complete reorganization of residency programs with hospitals and preceptors more carefully chosen and better oriented as to the aims and procedures of residency is suggested.

This report concludes with the following 31 recommendations:

1. More encouraging support of programs by parent schools and interested organizations.
2. Conversion to preservice education.
3. Age limits of 21 through 27 for applicants.
4. A prescribed preprofessional course as a requirement for admittance.
5. Less preference of experienced applicants.
6. Clearly defined attributes and qualifications they expect students to have acquired.
7. A carefully selected representative admissions advisory committee.
8. Comprehensive interviews of applicants.
9. Application forms requesting more information, particularly concerning extra curricular activities.
10. Definition of qualifications for administrator-ship.
11. Explicitly stated and adhered to admission procedures.
12. Programs be located in schools of business administration.
13. Four-part curriculum: (a) Administration and policy formulation (b) Organization and operations (c) Analysis, evaluation and control (d) Environment of administration in hospitals.
14. Residency be made an integral part of the programs.
15. Established optimum qualifications of preceptorship.
16. Faculty and preceptors together develop program of residency.
17. No exemptions from residency even on grounds of experience.
18. Seminar approach in classes.
19. Field trips and visiting lectures limited to such as definitely contribute to course.
20. Classes kept to seminar size.
21. Extensive use by students and faculty of current publications.
22. Scheduled class hours limited to 18 hours per week.
23. Continuous evaluation of students.
24. Opportunities for research.
25. Recognition of the importance of research.
26. Co-ordination of research of various programs.

27. No fewer than 2 faculty positions, at least one full time.

28. Recruitment and training of future faculty members.

29. Annual bulletins.

30. Bulletins mailed annually to all schools of business administration.

31. Continuing self-evaluation by programs.

Though the in-service training period is of debatable practicability, this program seems finely organized and well calculated to turn our efficient and capable hospital administrators of the business manager type.

C. N. BAGANZ, M. D.,
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Lyons, N. J.

HEREDITY IN EPILEPSY: AN ELECTROENCEPHALOGRAPHIC STUDY OF RELATIVES OF EPILEPTICS. By Bent Harvald. (Copenhagen: Ejnar Munksgaard, 1954. Price: \$3.25.)

A number of the European countries are ahead of America in having institutes of human genetics. The present monograph is a translated dissertation of work carried on at the Institute in Copenhagen toward a degree from the University of Copenhagen. It comprises 122 pages that carry 43 tables, 10 figures, and approximately 175 references. The study was designed to test the observations Lennox, Gibbs, and Gibbs made in 1940 that brain-wave abnormalities are unduly common among the near relatives of epileptics. Confirmation is accomplished through analysis of the EEG's of 237 epileptics and 901 of their near and far relatives. In a control group of 693 applicants for aviation training, the EEG's of 3.3% were markedly abnormal. If the EEG's of patients were markedly abnormal, the EEG's of their near relatives were also markedly abnormal in 14.4%; this figure was only 4.1% if records of patients were normal or only slightly abnormal. Relatives less than 16 years of age were omitted from the study. Gross abnormalities occurred twice as often in female as in male relatives and 40% more often in near relatives than in distant relatives. The epilepsy history was tabulated for 952 near and 1,834 distant relatives of the 237 patients. Among relatives of the idiopathic group of patients, epilepsy was 10 times more common than among relatives of the symptomatic group. The incidence of early childhood convulsions, syncope, and migraine among relatives was examined, as well as psychosis, psychopathy, and criminality. These conditions did not relate to EEG abnormalities of patients. Neither these conditions nor oligophrenia, manic-depressive psychosis, and schizophrenia were excessive with respect to the general population. The author emphasizes that the whole genetic entity of the individual must be considered and that a predisposition to epilepsy may well be combined with valuable qualities which outweigh the hereditary taint. In general, marriage and children should not be discouraged nor abortion or sterilization resorted to. However, even in a 7-page discussion, he is unable to give any definite

explanation of the mode of inheritance. He rejects the explanation of a simple recessive inheritance. Multiple cases in the same family suggest a monomeric (single gene) inheritance, but these families are rare. There are perhaps different genes or different allelomorphs for the same gene. The material has been subjected to statistical appraisal. The study is a model of careful review of the pertinent literature and of an objective appraisal of the data in hand.

W.M. G. LENNOX, M.D.,
Boston, Mass.

PSYCHOLOGY IN THE WORLD EMERGENCY. By *Various Authors.* (Pittsburgh: University of Pittsburgh Press, 1952. Price: \$4.00.)

Psychology in the World Emergency, since it is a book on military psychology, is a book with a specialized appeal. Actually it consists of 8 lectures delivered in 1952 at the University of Pittsburgh by military specialists. Although there are attractive advantages in this manner of composing a book, there are inherent weaknesses. Some of the papers give every indication of having got into print pretty much as they were spoken, with a prodigality of words much in need of pruning and even with what look like topical jokes, now inscrutable or beyond resuscitation. The language of not a few of these papers reads like a particularly baffling kind of Pentagonee.

With justifiable pride, this book points out the valuable contributions of psychology to the late war effort; its success in classification tests, in job analysis, and in the general business of screening men, or of placing them where they would do the most good. There is much talk of man-machine systems, a phrase which is bound to become increasingly meaningful with the continuous complication of modern fighting equipment. This is especially true of radar and of jet aircraft operations.

One is impressed by the amount of research going on. Into numerous research projects have filtered not a few of the 1,250 psychologists who were employed at the height of the war effort. To be sure the purpose of any military enterprise including military psychology is to win wars and quite rightly so, yet one is staggered by the cost of modern warfare in terms of human dignity. The writer—it may have been Havelock Ellis—who was opposed to war, "because it had given up hand-to-hand combat," was enunciating something more than a joke. For there is something dehumanizing about modern push-button warfare with its emphasis on "human engineering," and the increasingly complex problem of fitting the modern fighting man into his own Frankenstein-like creations. At times we catch a glimpse of a kind of hell, "We wish to deal with more complex systems, such as assemblages of machines, assemblages of men and machines, assemblages of men, and the ultimate complex system, individual human behavior . . . [p. 98]."

The title of this book is perhaps a little misleading. Certainly some people on the strength of the title will buy this book hoping to find out how

psychology might prevent wars, not how it can keep the witches' cauldron boiling and contribute to bigger and more destructive holocausts. But by definition, this is not the province of psychology but of ethics, although many psychologists imprisoned by the brilliant web of achievements which they have spun around themselves, do not readily perceive this. For psychology does not deal with ideals and values, that is, with things ultimately good for man, things that are worthwhile striving for. This inherent weakness is reflected in the book's rather lame treatment of morale; "Morale, of course, is the tendency for the individual to do the things which he can do [p. 10]." Actually morale is the main driving force in winning combat and almost alone determines whether there will be a high or a low psychiatric breakdown rate. And possibly this is true of life itself if we consider it as an attenuated and more generalized kind of warfare.

Some readers possibly would have welcomed a concluding chapter explaining these things, which although trite, are constantly in need of fresh restatement. For with the dropping of atomic bombs, we have all of us crossed a sort of Rubicon and actually have passed from warfare to mass destruction where the very basis of civilization is at stake. Were such a chapter written, possibly not irrelevant would be Bougle's thoughts: ". . . values are as central for the human sciences as measurement is for the classical, physical sciences. . . . Here we are in the heart of both social behavior and feeling."

HIRAM K. JOHNSON, M.D.,
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ALLGEMEINE UND SPEZIELLE PSYCHIATRIE. M. Reichardt. Ein Lehrbuch fuer Studierende und Aerzte. Unter Mitwirkung von H. Binder, M. Remy, Th. Spoerri, A. Weber, J. Wyrsch herausgegeben von E. Gruenthal und G. E. Stoerring. 4 vollstaendig neu bearbeitete Auflage. (Basel: Karger, 1955. Price: 73.80 Swiss Fr.)

The three preceding editions of Martin Reichardt's textbook had an excellent reputation in Germany and Switzerland. The editors and contributors dedicated this new edition to Reichardt who recently celebrated his eightieth birthday. They had undertaken this considerable labor on Reichardt's wish.

Stoerring (Kiel) wrote the first part, general psychiatry. He gives a rather exhaustive, if condensed survey of the field. Appended to this part are a few well written pages by Spoerri on the "problem culture and psychopathology."

The second part, special psychiatry, is divided into 17 chapters. Weber contributed the first chapter, Child Psychiatry, in which after a brief exposition on the normal child the pertinent disorders are dealt with excellently. It is followed by Binder's "abnormal psychological reactions and developments" (II) that is up to date as regards dynamics, but does not claim that one and one school only of depth psychology can do all the work. In this as in the other chapters there is a spirit of understanding

without any tendency toward dogmatism. Three chapters—the psychopathies (III), manic-depressive or circular psychosis (V) and schizophrenia (VI)—bear the signature and all the well-known features of the writing of Wyrach. He has only a few years ago published the classical "person of the schizophrenic," which is reflected in these chapters. Wyrach also wrote about the Swiss law in the XVII chapter in which Stoerring dealt with the pertinent German law. All the other chapters have been taken over by Gruenthal: feeble-mindedness (IV), for which in our country the interest of the psychiatrists seems to be more and more disappearing, convulsive diseases (VII), general paresis (VIII), acute infectious and toxic diseases (IX), endocrine disturbances (X), other organic brain diseases (XI), addictions and other intoxications (XII), alcoholism (XIII), traumatic disorders and deficiencies (XIV), cerebral diseases of middle and old age (XV); thoroughly solid chapters, some of them outstanding clinically as well as pathologically with a goodly number of fine pictures; in several of these chapters Gruenthal can refer to his own research. Remy contributed "the electroencephalography in psychiatry" (XVI) in a short, fluid, and very helpful chapter.

More and more one is impressed with the impossibility—or near-impossibility—of one-man textbooks in psychiatry. The field has grown too large and too specialized in many directions. One is not surprised to see more books in collaboration. However, there the danger lures that a common view point is lacking, so that despite all attempts at organizing the overwhelming material the presentations are unequal and even, now and then, contradictory. In this as in other respects, editors and contributors of this book have been remarkably successful. It was inevitable that a number of topics must be dealt with by more than one author, e.g. the neuroses, certain psychotic disturbances. There are not only references from one to the other part of the book, but there has also been reached a common basis and a common "roof" without the necessity for any of the authors to give anything but his opinion, without soft-pedaling, so to speak. Professor Reichardt may be proud of this edition and we are glad to have it.

EUGEN KAHN, M.D.,
Houston, Tex.

EMOTIONS AND BODILY CHANGES. Fourth Edition.
By Flanders Dunbar, M.D., Med.Sc.D., Ph.D. (New York: Columbia University Press, 1954. Price: \$15.00.)

This monumental work in its previous editions, beginning in 1935, and now in the huge 4th edition (x,192 pages), has established itself as the standard and encyclopedic reference work on the psychic and somatic relationships and mutual influences in the various forms of illness.

The general arrangement of the material is the same as before, but each section has been greatly expanded to include the constantly accumulating contributions in all divisions of the field. The book

now covers the literature from 1910 to 1953. The extent of the revision is indicated by the fact that the chapter on Bones, including Odontology, has been increased fifteenfold, while the division on Therapeutic Considerations has been completely rewritten. Here one will find much good counsel on the physician-patient relationship.

The extent of coverage is also shown in the space necessary for the bibliography which is gathered together at the back of the volume and arranged according to the chapter headings in the body of the book. It occupies 264 pages. A very full index takes up 176 pages.

At the end of the text is a new tipped-in chart showing the personality profiles of 8 psychosomatic diagnostic groups based on 1,600 hospital admissions.

As to the word "psychosomatic," which continues to be criticized as suggesting a dichotomy between mind and body, the author remarks in an earlier edition that in time the adjective would become obsolete because it would be recognized that all medicine is psychosomatic. In the present edition she has come to like the word better and thinks it is likely to persist "because no other has been found which better calls attention to the organism as a unity." The reviewer would be inclined to agree with the author's earlier opinion, and that the term should become obsolete not so much because it suggests a dichotomy between soma and psyche but because it suggests a dichotomy between psychosomatic medicine and medicine.

C. B. F.

CHANGING NAVAHO RELIGIOUS VALUES: A STUDY OF CHRISTIAN MISSIONS TO THE RIMROCK NAVAHOS. Reports of the Rimrock Project Values Series, No. 2, Papers of the Peabody Museum of American Archaeology and Ethnology. By Robert N. Rapoport. (Cambridge: Harvard University, 1954. Price: \$3.00.)

This is the second monograph in the Rimrock Values Series sponsored by the Department of Anthropology of Harvard University and the Rockefeller Foundation. The first study by Evon Z. Vogt dealt with *Navaho Veterans: a study of Changing Values* (1951). This second study is concerned specifically with the changing religious attitudes of the Navahos under the simultaneous impact of two Christian missions in the Rimrock area of New Mexico and, like its predecessor, is essentially a comparative study in the dynamics of acculturation. The monograph is based on field research conducted by the author during 1948 and 1950 and is an "attempt to analyze changing cultural forms in terms of the processes of re-orienting individual need-dispositions as a consequence of the forces of social change and disorganization" (p. 3). The study is noteworthy not only for its use of a carefully specified comparative design but also for its application of sampling and statistical procedures.

Dr. Rapoport is especially conscious of the problem of method and procedure in the gathering of his data and in his evaluation of their significance. He

envisiones the innovating program of the missions as a kind of light affecting the prism of Navaho social structure and personal need-dispositions, and eliciting a spectrum of response types. His approach is essentially psychocultural and is intended to correlate need-dispositions with behavioral response patterns. Need-dispositions are viewed as both products of changing Navaho life and predisposers to favorable or unfavorable responses to missionary programs (p. 5). Conventional techniques of depth interviews of the nondirective type, participant observation, and choice of key informants were used (p. 12). A great deal of tact and attitude of neutral sympathy in relation to Navaho informants, missionaries, and white population.

After a brief history of the "Galilean" mission and the Mormon Church among the Rimrock Navahos, the author devotes an illuminating chapter to "Value Comparisons" in which he examines in detail the contrasting elements in the traditional values of the Navahos and the missionaries. Values relevant to power and health, family and social relationships, and also self-expression are examined systematically. He notes the Navaho emphasis on ritual knowledge as a source of strength and cosmic harmony and the role of public ridicule and shame in enforcing rules of behavior. The Galilean notion of man's intrinsic guilt and the conception of an afterlife of supernatural reward and punishment are presented in sharp contrast. Dr. Rapoport explains convincingly why the Galilean mission with its categorical rejection of native customs and values succeeded in winning converts while the more liberal Mormons were comparatively unsuccessful. His analysis of the basic response types ranging from "staunch Galileans" to apostates, from Mormon-oriented persons to native "singers-curers" reveals strikingly the disparity of Navaho responses to Christian missionary activity against the background of individual need-dispositions and historical, social conflict. The pragmatic, utilitarian attitude of the Navahos in accepting or rejecting the Christian religion becomes particularly apparent. The author's conclusion is that conversion to Christianity in the case of the Navahos is a response to socio-cultural disorganization and emotional need.

Dr. Rapoport's monograph is a significant contribution to our knowledge of the psychodynamics of acculturation and comparative values. It is an excellent example of the importance of planned, systematic research in depth for which Dr. Kluckhohn and the Laboratory of Social Relations at Harvard University also deserve much credit.

DAVID BIDNEY,
Department of Anthropology,
Indiana University.

APHASIA THERAPEUTICS. By Mary Coates Longerich, Ph.D., and Jean Bordeaux, Ph.D., (New York: Macmillan, 1954. Price: \$3.75.)

This book reflects more than 20 year's experience by the authors in working with the speech and language problems presented by aphasic patients. In the brief space of 163 pages, the commoner concepts of aphasia are reviewed sketchily,

and reasonable therapeutic techniques are described in more detail. No claim is made that these techniques are revolutionary or original with the authors, but they give sufficient concrete examples of their highly individualized approach to help referring physicians understand more fully how ingenious the competent speech therapist must be. The 56 pages they devote specifically to speech and language therapy are well worth reading.

The chapter devoted to testing suffers from the partially unavoidable handicap of overlapping conclusions. Methods of finally evaluating the total results of the 28 tests described might well have been discussed more specifically.

The remainder of the book presents the defects so often encountered in efforts by specialists to comment on related fields in which their own actual experience is necessarily much less adequate than in their own specialty. As the authors themselves point out in another connection, "An understanding of one's own limitations is rarely achieved easily even by normal individuals . . ." Nevertheless, naïveté can be irritating. For example, most neuropsychiatrists will be annoyed by the suggestion that the speech therapist "insist that a referred patient be checked with the electroencephalograph" on the basis that this study may "indicate" the presence of neurosis, alcoholism, or psychosis! There is also a regrettable tendency to use such stilted words as "strokelet," "motoric," and "scotomized," and the inconstant use of Latin anatomical terms suggests an effort to impress the reader unnecessarily. (The result is actually amusing when reference is made to "*ariae striatae*" in the discussion of music agnosia!)

The authors state clearly that dysarthria and hysterical phenomena are not manifestations of aphasia. Since dysarthria may also benefit from competent speech therapy, one need only be puzzled by its inclusion among the symptoms of one type of receptive aphasia. It is more alarming to find nearly 2 pages devoted to "therapy for hysterical amblyopia" as part of a speech therapist's function.

CALVIN S. DRAYER, M. D.,
Philadelphia, Pa.

MORE CLINICAL SONNETS. By Merrill Moore, M. D. (New York: Twayne Publishers, 1954. Price: \$3.00.)

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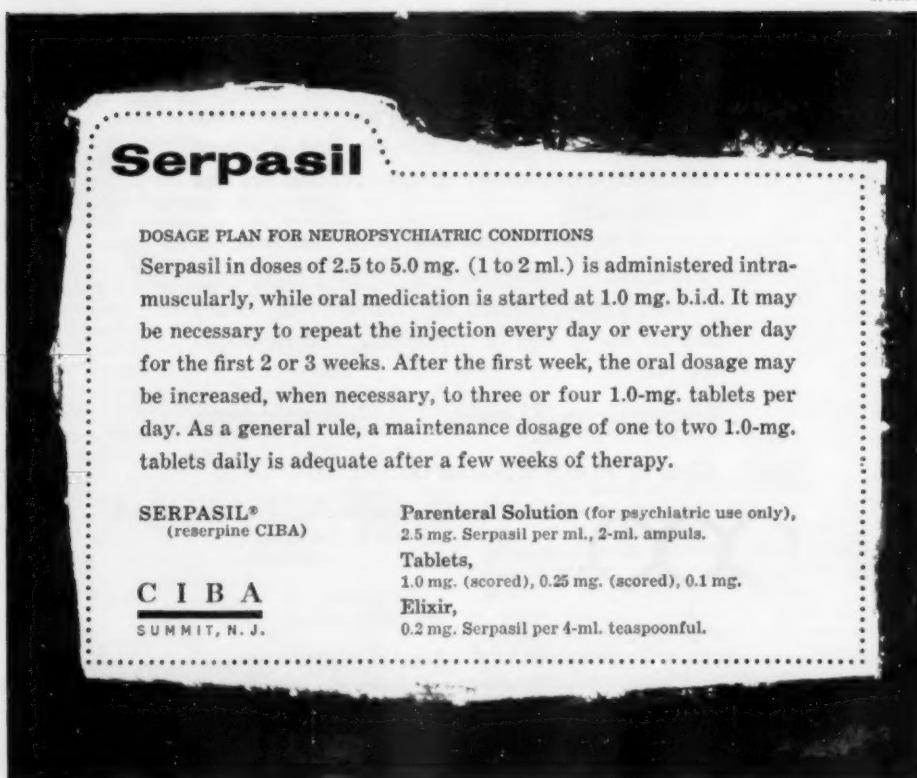
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1. Noce, R. H., Williams, D. B., and Rapaport, W.: J.A.M.A. 156:821 (Oct.) 1954.

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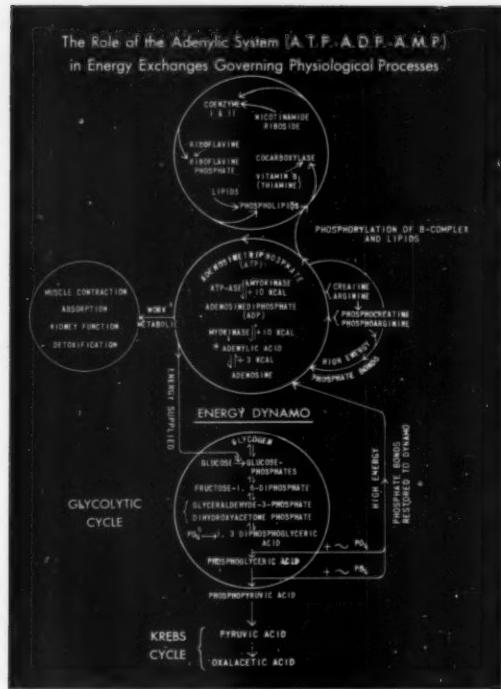
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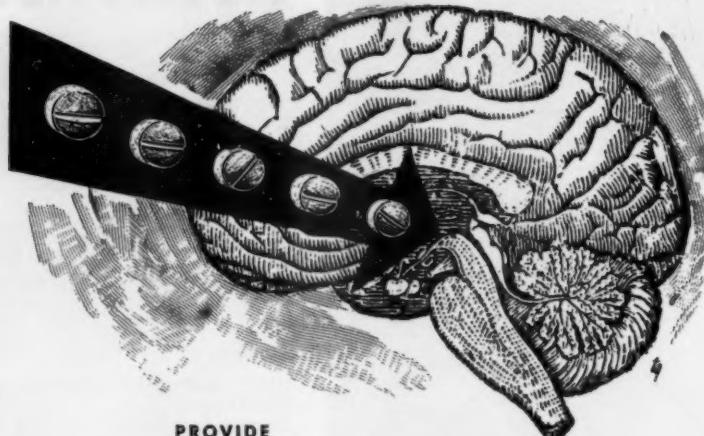
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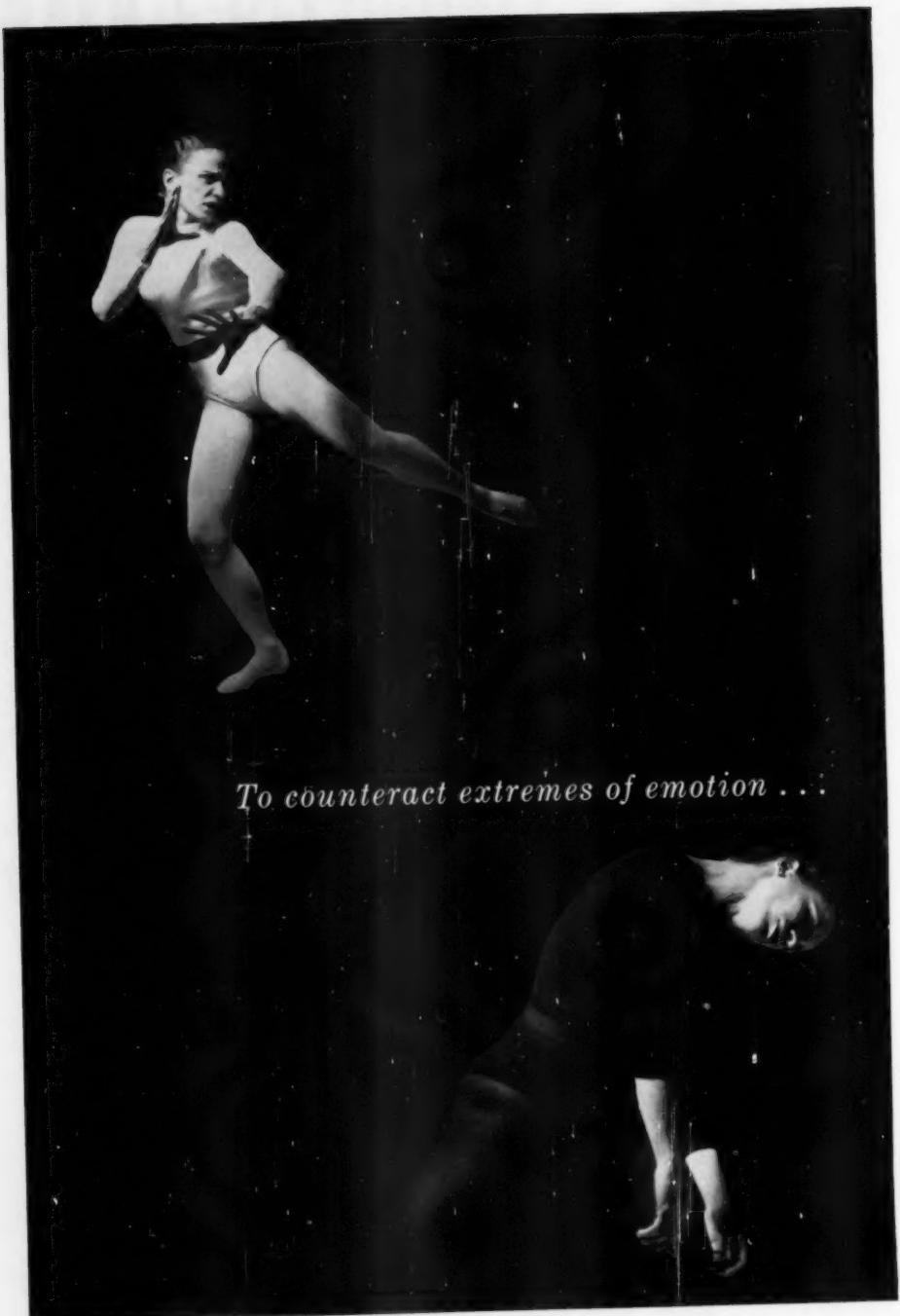
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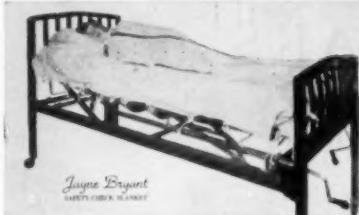
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The members of The American Psychiatric Association have always shown interest in the Exhibit Sections of the meeting and, therefore, the exhibits have been carefully selected for newness and applicability in this particular field of medical practice. You are cordially invited to visit the exhibit sections, and any comments or suggestions you have to offer will be welcome.

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